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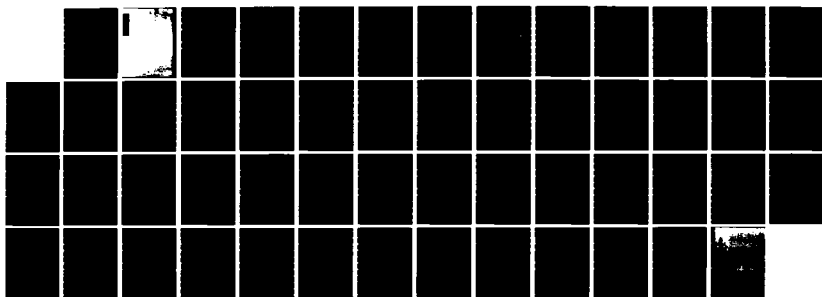
12831D LANCE MISSILE NUMBER 5337 ROUND NUMBER 389 MSL

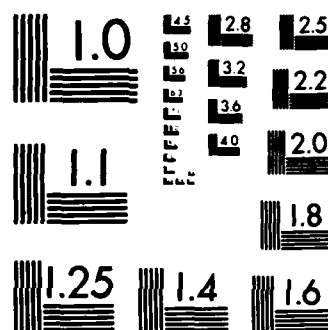
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22 JUNE 1983 (U) ARMY ELECTRONICS RESEARCH AND  
DEVELOPMENT COMMAND WSMR NM ATM. D C KELLER JUN 83  
ERADCOM/ASL-DR-1303 F/G 4/2

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NATIONAL BUREAU OF STANDARDS-1963-A

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1. REPORT NUMBER DR 1303	2. GOVT ACCESSION NO. AD-A132420	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) 12831D LANCE Missile Number 5337 Round Number 389 MSL.		5. TYPE OF REPORT & PERIOD COVERED
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) White Sands Meteorological Team		8. CONTRACT OR GRANT NUMBER(s) DA Task 1F665702D127-02
9. PERFORMING ORGANIZATION NAME AND ADDRESS US Army Electronics Research & Development Cmd Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico 88002		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Electronics Research and Development Cmd Adelphi, MD 20783		12. REPORT DATE JUNE 1983
		13. NUMBER OF PAGES 47
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		15. SECURITY CLASS. (of this report)  UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
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19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)  -Meteorological data gathered for the launching of the 12831D LANCE, Missile Number 5337, Round Number 389 MSL are presented in tabular form.		

## CONTENTS

	PAGE
INTRODUCTION-----	1
DISCUSSION-----	1
GENERAL AREA MAP-----	2
LAUNCH AREA DIAGRAM-----	3
 TABLES	
1. Surface Observation Taken at 1730 MDT at LC-33-----	4
2. Anemometer-Measured Wind Speed and Direction, LC-33 Fixed Pole, Taken at 1730 MDT-----	5
3. Anemometer-Measured Wind Speed and Direction, Tower Levels 1, 2, 3, and 4, taken at 1730 MDT-----	5
4. Launch Area pilot-balloon measured wind data at 1718 MDT----	6
5. Launch Area pilot-balloon measured wind data at 1731 MDT----	7
6. Computer Met Message data-----	8
7. WSD Significant Level Data at 1730 MDT-----	9
8. WSD Upper Air Data at 1730 MDT-----	10
9. WSD Mandatory Levels at 1730 MDT-----	14
10. Jallen Significant Level Data at 1740 MDT-----	15
11. Jallen Upper Air Data at 1740 MDT-----	17
12. Jallen Mandatory Levels at 1740 MDT-----	39
13. Stallion Significant Level Data at 1730 MDT-----	40
14. Stallion Upper Air Data at 1730 MDT-----	42
15. Stallion Mandatory Levels at 1730 MDT-----	47

## INTRODUCTION

12831D Lance, Missile Number 5337, Round Number 389-MSL, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1730:04 MDT, 22 JUN 1983. The scheduled launch time was 1730 MDT.

## DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

### 1. Observations

#### a. Surface

(1) Standard surface observations to include pressure, temperature ( $^{\circ}\text{C}$ ), relative humidity, dew point ( $^{\circ}\text{C}$ ), density ( $\text{gm/m}^3$ ), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

#### b. Upper Air

(1) Low level wind data were obtained from pilot-balloon observations at:

<u>SITE</u>	<u>ALTITUDE</u>	<u>TIME</u>
WSD	1080 meters	1718 MDT
WSD	3000 meters	1731 MDT

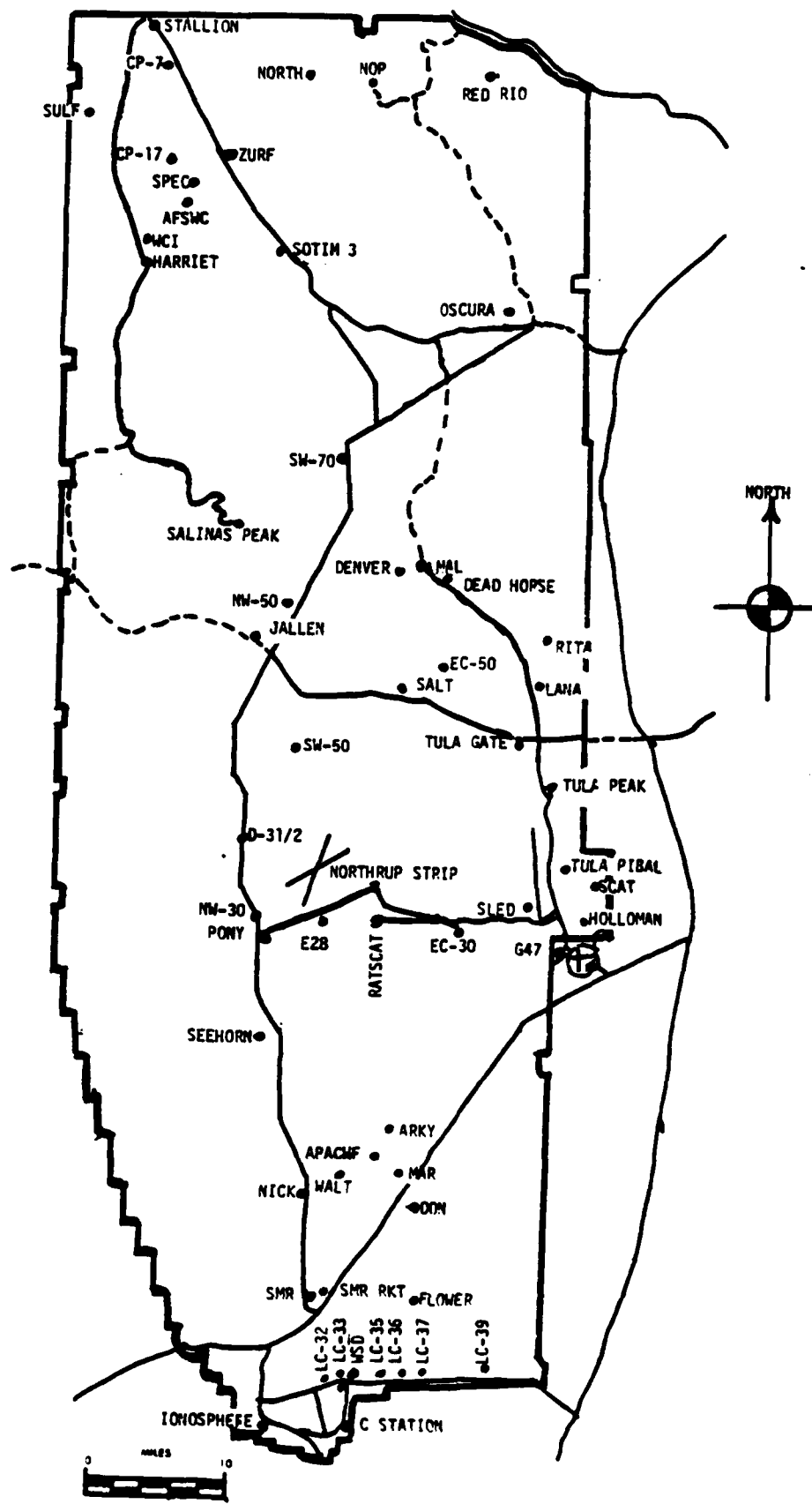
(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to high as possible:

#### SITE AND TIME

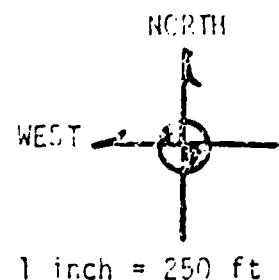
WSD	1730 MDT
JALLEN	1740 MDT
STALLION	1730 MDT

Acceleration Log	
RECEIVED	X
DATE	
TIME	
UNIT	
JUN 22 1983	
Fm	
Dist	
Av	
Dist	
A	22

# WSMR METEOROLOGICAL SITES



LC-33  
Launch Area



Y186,500

LINE OF FIRE

Anemometer Pole #3

Anemometer Pole #2

MET  
Tower

Y186,000  
T-9 Radar

L-579A

L-519A

L-351A

L-350A

Anemometer Pole #1

Y185,500

X485,000

X485,500

X486,000

Y185,000

L-600

# PROJECT SURFACE OBSERVATION

TABLE 1									
STATION LC-33									
DATE 22 JUN 83									
X= 484,185.64 Y= 185,957.73 H= 3995.00									
TIME M D I	PRESSURE mb	TEMPERATURE °C	DEW POINT °C	RELATIVE HUMIDITY %	DENSITY gm/m <sup>3</sup>	DIRECTION degs	WIND SPEED kts	CHARACTER kts	VISIBIL- ITY
1730	878.5	34.1	3.8	15		108	07		30

OBSERVATIONS TO VISIBILITY	CLOUDS						REMARKS
	1st LAYER		2nd LAYER		3rd LAYER		
	AMT	TYPE	AMT	TYPE	AMT	TYPE	
	4	SC	6,000	4	AS	10,000	TCU E

## PSYCHROMETRIC COMPUTATION

TIME: MDT	1730
DRY BULB TEMP.	34.1
WET BULB TEMP.	17.0
WET BULB DEPR.	17.1
DEW POINT	3.8
RELATIVE HUMID.	15

TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDSDATE 22 JUN 83 1730 M D I  
DAY MONTH YEAR TIME

\*\*

POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL			POLE #2 X485,874.29 Y186.012.00 H4033.57 53.0 ft. AGL			POLE #3 X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
T-30	086	16	T-30	084	13	T-30	106	13
T-20	086	18	T-20	088	11	T-20	099	16
T-10	086	17	T-10	086	16	T-10	118	19
T-0	086	23	T-0	081	15	T-0	098	21
T+10	086	17	T+10	089	15	T+10	099	20

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
T-30	109	12	T-30	094	18
T-20	107	10	T-20	080	13
T-10	105	08	T-10	094	19
T-0	108	07	T-0	088	16
T+10	117	13	T+10	093	21

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KNOTS	T-TIME SEC	DIR DEG	SPEED KNOTS
T-30	084	17	T-30	MISG	17
T-20	090	20	T-20	MISG	20
T-10	088	20	T-10	MISG	25
T-0	086	23	T-0	MISG	19
T+10	080	21	T+10	MISG	24

\*\* Pole #1 Dirs. estimated

## PILOT BALLOON MEASURED WIND DATA

TABLE 4

RELEASED FROM WSD DATE 22 JUN 83 TIME 1718 MDT

COORDINATES (WSTM)    X= 488,852.29    Y= 184,982.45    H= 3993.75

NOTE: WIND DIRECTIONS ARE REFERENCED TO \_\_\_\_\_.

HEIGHTS ARE METERS AGL X OR FEET AGL

[illegible][illegible][illegible]



## COMPUTER MET MESSAGE DATA

22 JUNE 1983

WSD 1730 MDT

METCM1324064

222350122877

00142020 30820877  
 01140019 30660868  
 02139025 30310844  
 03167024 29890806  
 04162016 29420761  
 05230007 28980718  
 06339004 28530677  
 07384007 28080637  
 08397008 27640599  
 09405009 27230563  
 10399011 26300529  
 11367006 26460496  
 12123006 25980450  
 13204007 25220394  
 14264014 24500344  
 15299013 23660298  
 16273014 22860258  
 17321016 22260222  
 18347022 21720190  
 19345027 21540162  
 20279022 21120138  
 21303014 20670118  
 22277012 20540100  
 23240013 20910085  
 24200012 21060072  
 25179015 21010061  
 26156023 21390052

JALLEN 1740 MDT

METCM1324064

222370124875

00213010 30710875  
 01225017 30800866  
 02246016 30390842  
 03282010 30010805  
 04286008 29550760  
 05292013 29090717  
 06259017 28630676  
 07251016 28170636  
 08222018 27710599  
 09210019 27240563  
 10192017 26810528  
 11165016 26480496  
 12163016 25920450  
 13207009 25310394  
 14206002 24520343  
 15288004 23690298  
 16270011 22840258  
 17266013 22070221  
 18332022 21730190  
 19344025 21510162  
 20287019 21180138  
 21286021 20610118  
 22307017 20590100  
 23281009 20670085  
 24217014 20990072  
 25190018 21030061  
 26154018 21380052

STALLION 1730 MDT

METCM1228067

222350151850

00267010 30420850  
 01296013 30230841  
 02310015 30040817  
 03341017 29710781  
 04374013 29250737  
 05330011 28810695  
 06240010 28460655  
 07222013 27980616  
 08214019 27530580  
 09201021 27060544  
 10188020 26650511  
 11168019 26330479  
 12160010 25830434  
 13384005 25150380  
 14371005 24390331  
 15404004 23560287  
 16334016 22690248  
 17313027 22020213  
 18331023 21770182  
 19331023 21660156  
 20298014 20990133  
 21301016 20660113  
 22307013 20640096  
 23280012 20850081  
 24218013 21120069  
 25166015 21260059  
 26161017 21490050

STATION ALTITUDE 3489.00 FEET MSL  
22 JUNE 83  
ASCENSION NO. 318

SIGNIFICANT LEVEL DATA  
0173002038  
WHITE SANDS

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

TABLE 7

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
877.4	33.3	6.7	22.0
856.0	29.0	9.2	29.0
781.8	21.8	5.3	34.0
700.0	13.7	.4	40.0
622.6	5.9	-2.9	53.0
576.8	-2.2	-6.0	65.0
555.9	-2.1	-9.2	58.0
513.7	-7.7	-13.3	64.0
500.0	-8.2	-23.8	27.0
475.1	-11.0	-24.1	33.0
460.5	-12.0	-20.0	51.0
420.7	-16.4	-17.9	88.0
420.1	-17.7	-20.2	81.0
413.3	-18.1	-25.3	53.0
400.0	-20.6	-25.6	64.0
392.4	-21.1	-25.4	68.0
305.3	-22.3	-31.7	42.0
354.3	-27.0	-30.3	33.0
340.0	-27.4	-31.0	71.0
343.1	-27.8	-39.6	31.0
300.0	-36.5	-45.8	37.0
286.2	-38.8	-49.2	32.0
267.0	-42.9		
250.0	-46.3		
200.0	-54.2		
176.7	-58.3		
162.9	-57.3		
150.0	-58.2		
120.3	-65.1		
117.9	-66.5		
100.0	-68.2		
90.2	-67.1		
80.3	-64.4		
77.8	-62.1		
70.0	-62.6		
60.7	-63.8		
50.0	-57.8		
40.3	-55.0		
33.2	-50.8		

STATION ALTITUDE 3989.00 FEET MSL  
22 JUNE 83  
ASCENDING NO. JIA

UPPER AIR DATA  
0173002030  
WHITE SANDS

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

TABLE 8

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES, CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (TN) SPEED KNOTS	INDEX OF REFRACTION
3989.0	877.4	33.3	22.0	992.6	683.6	80.0	1.000267
4000.0	877.1	33.2	22.1	992.4	683.6	80.1	1.000267
4500.0	862.3	30.9	25.8	982.8	681.1	82.8	1.000267
5000.0	847.7	28.8	29.2	973.1	678.7	85.0	1.000265
5500.0	833.2	27.3	30.2	961.3	676.9	86.8	1.000260
6000.0	818.8	25.8	31.2	949.7	675.2	88.3	1.000256
6500.0	804.8	24.3	32.3	938.2	673.4	89.7	1.000251
7000.0	791.0	22.8	33.3	926.9	671.7	91.3	1.000247
7500.0	777.2	21.4	34.3	915.4	670.0	93.0	1.000242
8000.0	763.5	20.1	35.3	903.4	668.6	94.5	1.000238
8500.0	750.1	18.8	36.2	891.6	666.9	97.8	1.000234
9000.0	736.8	17.5	37.2	879.9	665.4	104.0	1.000229
9500.0	723.9	16.2	38.2	868.4	663.9	112.9	1.000225
10000.0	711.1	14.9	39.1	857.1	662.3	126.0	1.000221
10500.0	698.5	13.5	40.3	845.9	660.8	148.1	1.000217
11000.0	685.8	12.2	42.5	834.5	659.2	173.2	1.000214
11500.0	673.4	10.8	44.8	823.3	657.6	198.0	1.000211
12000.0	661.2	9.5	47.0	812.3	656.0	208.3	1.000207
12500.0	649.2	8.2	49.2	801.5	654.4	215.9	1.000204
13000.0	637.4	6.8	51.5	790.8	652.8	218.2	1.000201
13500.0	625.8	5.5	53.8	780.1	651.2	219.7	1.000198
14000.0	614.1	4.2	56.4	769.3	649.7	220.9	1.000194
14500.0	602.7	2.9	59.0	758.6	648.1	221.9	1.000191
15000.0	591.5	1.6	61.5	748.1	646.6	223.3	1.000188
15500.0	580.5	.2	64.1	737.8	645.0	225.9	1.000185
16000.0	569.6	-.8	62.6	727.0	643.6	228.2	1.000180
16500.0	558.9	-1.8	59.0	716.0	642.4	227.9	1.000176
17000.0	548.2	-3.1	59.1	705.8	640.9	226.9	1.000172
17500.0	537.7	-4.5	60.5	695.9	639.2	225.0	1.000169
18000.0	527.5	-5.8	62.0	686.1	637.5	221.2	1.000166
18500.0	517.4	-7.2	63.5	676.8	635.9	217.0	1.000163
19000.0	507.4	-7.9	47.1	665.7	634.8	211.5	1.000157
19500.0	497.6	-8.5	27.6	654.5	634.0	202.6	1.000151
20000.0	487.9	-9.6	30.0	644.4	632.7	191.4	1.000148
20500.0	478.3	-10.7	32.4	634.6	631.3	121.3	1.000146
21000.0	469.0	-11.5	41.1	623.8	630.5	64.8	1.000145
21500.0	459.8	-12.1	51.9	612.9	629.8	56.2	1.000143
22000.0	450.7	-13.4	62.6	603.0	628.3	60.1	1.000142
22500.0	441.7	-14.6	73.2	594.5	626.8	73.8	1.000141
23000.0	433.0	-15.7	83.9	585.6	625.2	85.6	1.000139

STATION ALTITUDE 3989.0 FEET HSL  
22 JUNE 83 1730 MDT  
ASCENSION 10. 318

UPPER AIR DATA  
017300Z038  
WHITE SANDS

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

TABLE 8 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE, CENTIGRADE	REL HUMIDITY PERCENT	DENSITY GM/CM <sup>3</sup> METER	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
23500.0	424.3	-17.1	84.1	576.7	623.7	95.7	6.7	1.000136
24000.0	415.4	-18.0	63.4	567.1	622.6	106.5	6.6	1.000132
24500.0	407.4	-19.2	57.8	558.5	621.1	111.8	6.7	1.000129
25000.0	399.2	-20.7	64.4	550.3	619.3	113.5	6.9	1.000127
25500.0	391.1	-21.3	63.1	540.6	618.4	115.3	7.1	1.000125
26000.0	383.0	-22.6	41.4	532.4	616.7	123.0	8.9	1.000121
26500.0	375.1	-23.8	39.1	523.9	615.3	128.1	10.9	1.000119
27000.0	367.4	-25.0	36.9	515.5	613.8	132.6	12.4	1.000117
27500.0	359.8	-26.1	34.7	507.3	612.4	137.5	13.5	1.000115
28000.0	352.4	-27.1	44.7	498.8	611.2	141.9	14.3	1.000113
28500.0	345.0	-27.6	46.6	489.4	610.5	147.1	13.9	1.000111
29000.0	337.7	-28.8	31.7	481.4	609.0	152.7	13.6	1.000108
29500.0	330.5	-30.2	32.7	473.9	607.3	159.7	14.2	1.000107
30000.0	323.5	-31.6	33.6	466.5	605.5	166.1	15.1	1.000105
30500.0	316.6	-33.0	34.6	459.2	603.8	168.5	15.0	1.000103
31000.0	309.9	-34.4	35.6	452.1	602.0	170.0	14.7	1.000101
31500.0	303.3	-35.8	36.5	445.0	600.2	168.7	14.2	1.000100
32000.0	296.7	-37.0	35.8	437.7	598.7	164.6	13.6	1.000098
32500.0	290.3	-38.1	33.5	430.2	597.3	160.5	13.1	1.000096
33000.0	283.9	-39.3	28.3**	422.9	595.8	158.6	13.1	1.000095
33500.0	277.7	-40.6	18.0**	415.9	594.1	156.7	13.2	1.000093
34000.0	271.5	-41.9	7.7**	409.0	592.4	156.0	13.3	1.000091
34500.0	265.5	-43.2		402.2	590.8	155.9	13.4	1.000090
35000.0	259.6	-44.4		395.2	589.3	155.4	13.4	1.000088
35500.0	253.7	-45.5		388.3	587.8	152.9	13.2	1.000087
36000.0	248.0	-46.6		381.3	586.4	150.2	13.1	1.000085
36500.0	242.3	-47.4		373.9	585.3	154.3	13.1	1.000083
37000.0	236.7	-48.2		366.7	584.3	160.5	13.2	1.000082
37500.0	231.3	-49.1		359.6	583.2	167.7	13.7	1.000080
38000.0	226.0	-49.9		352.6	582.1	176.3	15.2	1.000079
38500.0	220.8	-50.7		345.8	581.0	183.3	17.0	1.000077
39000.0	215.7	-51.5		339.1	580.0	186.7	18.3	1.000076
39500.0	210.8	-52.3		332.5	578.9	189.2	19.6	1.000074
40000.0	205.9	-53.2		326.1	577.8	191.3	20.8	1.000073
40500.0	201.2	-54.0		319.8	576.7	192.7	21.2	1.000071
41000.0	196.5	-54.9		313.4	575.7	194.0	21.6	1.000070
41500.0	191.8	-55.6		307.2	574.6	194.5	22.0	1.000068
42000.0	187.3	-56.4		301.0	573.6	194.4	22.2	1.000067
42500.0	182.9	-57.2		295.0	572.5	194.3	22.5	1.000066
43000.0	178.6	-58.0		289.1	571.5	195.3	23.3	1.000064

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.00 FEET MSL  
22 JUNE 83  
ASCENSION NO. 318

UPPER AIR DATA  
017300ZJUN  
WHITE SANDS

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LON DEG

1730 MDT

# TABLE 8 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUMIDITY PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (T) DEGREES (T)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
43500.0	174.3	-58.1		282.5	571.3	196.3	24.1	1.000063
44000.0	170.2	-57.0		275.4	571.6	196.7	24.9	1.000061
44500.0	165.2	-57.5		268.5	572.0	196.2	25.5	1.000060
45000.0	162.2	-57.3		261.8	572.3	195.8	26.1	1.000058
45500.0	158.4	-57.6		255.9	572.0	193.1	25.8	1.000057
46000.0	154.6	-57.9		250.2	571.6	186.9	24.2	1.000056
46500.0	150.9	-58.1		244.5	571.3	179.9	23.0	1.000054
47000.0	147.3	-59.0		239.7	570.0	172.7	22.2	1.000053
47500.0	143.7	-60.2		235.1	568.5	165.9	21.9	1.000052
48000.0	140.3	-61.3		230.7	567.0	159.0	21.9	1.000051
48500.0	136.9	-62.5		226.3	565.5	155.4	21.7	1.000050
49000.0	133.6	-63.6		222.0	564.0	157.7	20.8	1.000049
49500.0	130.3	-64.7		217.8	562.4	160.2	20.0	1.000049
50000.0	127.1	-65.4		213.1	561.6	162.5	18.8	1.000047
50500.0	124.0	-65.7		208.3	561.1	164.3	17.0	1.000046
51000.0	120.9	-66.1		203.5	560.6	166.5	15.2	1.000045
51500.0	118.0	-66.5		198.8	560.0	168.0	13.6	1.000044
52000.0	115.0	-66.8		194.2	559.7	166.9	12.5	1.000043
52500.0	112.2	-67.0		189.6	559.3	165.6	11.4	1.000042
53000.0	109.4	-67.3		185.1	559.0	164.2	10.6	1.000041
53500.0	106.7	-67.5		180.7	558.6	162.8	10.6	1.000040
54000.0	104.0	-67.8		176.5	558.3	161.3	10.6	1.000039
54500.0	101.4	-68.1		172.3	557.9	158.5	10.7	1.000038
55000.0	98.9	-68.1		168.1	557.9	153.2	11.0	1.000037
55500.0	96.5	-67.8		163.7	558.2	148.3	11.5	1.000036
56000.0	94.1	-67.5		159.4	558.6	143.5	11.8	1.000035
56500.0	91.7	-67.3		155.2	559.0	138.4	11.8	1.000035
57000.0	89.5	-68.0		150.5	560.6	133.4	11.9	1.000034
57500.0	87.3	-64.2		145.5	563.2	129.7	12.0	1.000032
58000.0	85.1	-63.7		141.6	563.8	127.4	12.2	1.000032
58500.0	83.1	-63.3		137.9	564.4	125.1	12.3	1.000031
59000.0	81.0	-62.8		134.3	565.0	123.9	12.4	1.000030
59500.0	79.1	-62.4		130.7	565.6	123.2	12.4	1.000029
60000.0	77.2	-62.1		127.4	565.9	122.6	12.5	1.000028
60500.0	75.3	-62.3		124.4	565.8	122.7	12.3	1.000028
61000.0	73.5	-62.4		121.4	565.6	122.9	12.1	1.000027
61500.0	71.7	-62.5		118.5	565.4	122.9	12.0	1.000026
62000.0	69.9	-62.6		115.7	565.3	120.8	12.0	1.000026
62500.0	68.2	-62.8		113.0	565.0	118.7	12.0	1.000025
63000.0	66.6	-63.0		110.4	564.7	115.6	12.4	1.000025

GEODETIC COORDINATES  
32.40043 LAT DEG  
106.37033 LONG DEG

UPPER AIR DATA  
017300Z038  
WHITE SANDS

STATION ALTITUDE 3989.00 FEET SL  
22 JUNE 83  
ASCENSION NO. 518 1730 MDT

TABLE 8 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUMIDITY PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
63500.0	63.6	-73.2		107.8	564.4	111.3	13.1	1.000024
64000.0	63.4	-63.4		105.3	564.2	107.5	13.9	1.000023
64500.0	61.8	-63.6		102.0	563.9	103.1	15.2	1.000023
65000.0	60.3	-63.6		100.3	563.9	99.1	16.8	1.000022
65500.0	58.9	-72.9		97.0	564.9	95.7	18.5	1.000022
66000.0	57.5	-72.1		94.9	565.9	93.6	19.1	1.000021
66500.0	56.1	-61.4		92.3	567.0	91.7	19.8	1.000021
67000.0	54.7	-60.6		89.7	568.0	90.2	20.6	1.000020
67500.0	53.4	-59.9		87.3	569.0	89.3	21.9	1.000019
68000.0	52.1	-59.1		84.9	570.0	88.5	23.3	1.000019
68500.0	50.9	-58.3		82.5	571.0	89.8	24.5	1.000018
69000.0	49.7	-57.7		80.3	571.8	92.3	25.7	1.000018
69500.0	48.5	-57.4		78.3	572.2	94.7	26.9	1.000017
70000.0	47.4	-57.1		76.4	572.6	94.9	25.6	1.000017
70500.0	46.2	-56.4		74.5	573.0	94.8	23.8	1.000017
71000.0	45.2	-56.5		72.6	573.5	94.1	22.1	1.000016
71500.0	44.1	-56.2		70.8	573.9	89.9	21.0	1.000016
72000.0	43.1	-55.9		69.0	574.3	85.3	20.1	1.000015
72500.0	42.0	-55.5		67.3	574.7	83.0	19.3	1.000015
73000.0	41.1	-55.2		65.6	575.1	83.8	18.6	1.000015
73500.0	40.1	-54.9		64.0	575.5	84.6	17.9	1.000014
74000.0	39.2	-54.4		62.4	576.2	87.3	17.3	1.000014
74500.0	38.3	-53.9		60.8	576.9	90.6	16.6	1.000014
75000.0	37.4	-53.4		59.2	577.6			1.000013
75500.0	36.5	-52.9		57.7	578.2			1.000013
76000.0	35.7	-52.3		56.3	578.9			1.000013
76500.0	34.8	-51.8		54.8	579.6			1.000012
77000.0	34.0	-51.3		53.4	580.2			1.000012
77500.0	33.2	-50.8		52.1	580.9			1.000012

STATION ALTITUDE 3989.00 FEET, SL  
22 JUNE 83  
ASCENSION NO. 318

MANDATORY LEVELS  
017300Z030  
WHITE SANDS

TABLE 9

PRESSURE (GEOPOTENTIAL) MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	WIND DATA	
				DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	29.0	9.2	29.	84.6	24.2
800.0	23.8	6.4	33.	90.2	26.0
750.0	18.8	3.5	36.	97.9	13.1
700.0	13.7	.4	40.	145.4	5.0
650.0	8.2	-1.0	49.	215.5	0.3
600.0	2.5	-4.5	60.	222.2	7.8
550.0	-2.9	-9.0	59.	227.1	10.5
500.0	-8.2	-23.0	27.	205.5	6.7
450.0	-13.5	-18.9	63.	60.9	0.2
400.0	-20.6	-25.0	64.	113.3	0.9
350.0	-27.3	-32.8	59.	143.4	14.2
300.0	-36.5	-45.0	37.	166.8	13.9
250.0	-46.3			151.2	13.1
200.0	-54.2			192.9	21.3
175.0	-58.2			190.1	24.0
150.0	-65.6			170.3	22.6
125.0	-68.2			163.6	17.7
100.0	-62.6			155.7	10.8
80.0	-62.6			123.6	12.4
70.0	-63.4			121.0	12.0
60.0	-57.8			90.5	17.1
50.0	-54.8			91.5	25.3
40.0				84.6	17.9

STATION ALTITUDE 4051.00 FT ET MSL  
22 JUNE 83  
ASCENSION NO. 90

SIGNIFICANT LEVEL DATA  
1730030090  
JALLEN

GEODETIC COORDINATES  
33.16712 LAT DEG  
106.49511 LON DEG

TABLE 10

PRESSURE	GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT
875.3	4051.0	32.5	9.3
871.1	4193.4	34.0	3.7
861.5	4522.0	34.3	4.0
850.0	4918.2	30.3	3.4
797.8	6759.2	25.4	.1
700.0	10461.4	15.1	-3.3
622.2	13687.4	6.1	-5.2
547.7	17060.0	-3.4	-8.6
522.7	18275.4	-6.3	-15.0
514.9	18662.0	-6.9	-11.6
500.0	19414.3	-8.3	-14.7
485.5	20164.0	-9.5	-29.9
461.5	21444.6	-12.6	-27.3
430.1	22680.0	-16.1	-24.3
435.1	22856.1	-15.7	-19.4
424.4	23297.8	-16.5	-19.4
400.0	24980.4	-19.4	-23.0
391.7	25490.9	-20.1	-24.0
384.5	25950.8	-21.1	-26.6
361.5	27300.1	-24.8	-27.8
300.0	31801.7	-36.0	-40.0
287.8	32747.0	-38.2	-40.9
285.6	32920.6	-39.0	-42.2
250.0	35879.6	-46.5	
216.8	38945.4	-53.8	
200.0	40645.4	-55.7	
186.5	42110.9	-56.1	
165.1	44660.9	-55.4	
156.3	45817.9	-56.4	
150.0	46677.1	-57.4	
125.1	50381.8	-66.3	
106.3	53250.7	-68.2	
100.0	54835.0	-66.9	
86.8	57654.5	-67.3	
70.0	61987.1	-62.4	
62.2	64387.9	-63.7	
50.0	68869.6	-58.3	
41.3	72850.2	-57.1	
30.0	79622.1	-52.1	
20.0	88485.5	-43.1	

STATION ALTITUDE 4051.00 FEET MSL  
 22 JUNE 83  
 ASCENSION NO. 90

SIGNIFICANT LEVEL DATA  
 17300.0090  
 JALLEN

GEODETTIC COORDINATES  
 33.14712 LAT DEG  
 106.49511 LON DEG

TABLE 10 CONT'D

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT
10.0 90839.4	-42.4	

STATION ALTITUDE 4051.00 FEET MSL  
22 JUNE 83 1740 MDT  
ASCENSION NO. 90

UPPER AIR DATA  
1730030090  
JALLEN

GEODETTIC COORDINATES  
33-16712 LAT DEG  
106-49511 LONG DEG

TABLE 11

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE				DIRECTION DEGREES(TN)	SPEED KNOTS	
4051.0	875.3	32.5	9.3	24.0	992.6	682.8	120.0	9.9	1.000269
4100.0	873.9	33.0	7.7	20.9	989.8	683.2	121.0	10.0	1.000263
4200.0	870.9	34.0	3.7	15.0	984.3	684.0	122.9	10.0	1.000251
4300.0	860.0	34.1	3.8	15.0	980.7	684.1	124.8	10.2	1.000251
4400.0	865.1	34.2	3.9	15.0	977.1	684.2	126.7	10.3	1.000250
4500.0	862.1	34.3	3.9	15.0	973.5	684.3	128.5	10.4	1.000249
4600.0	859.2	33.5	3.9	15.6	972.6	683.4	130.3	10.6	1.000249
4700.0	850.3	32.5	3.8	16.3	972.5	682.3	132.0	10.7	1.000249
4800.0	853.4	31.5	3.6	17.1	972.5	681.2	133.7	10.9	1.000249
4900.0	850.5	30.5	3.4	17.9	972.4	680.0	135.4	11.0	1.000249
5000.0	847.6	30.1	3.2	18.0	970.4	679.6	136.9	11.2	1.000248
5100.0	844.7	29.8	3.0	18.1	968.0	679.3	138.5	11.4	1.000247
5200.0	841.8	29.6	2.9	18.2	965.5	678.9	139.9	11.6	1.000246
5300.0	838.9	29.3	2.7	18.2	963.1	678.6	141.4	11.8	1.000245
5400.0	836.0	29.0	2.5	18.3	960.6	678.3	142.7	12.0	1.000244
5500.0	833.1	28.8	2.3	18.3	958.2	678.0	144.1	12.2	1.000244
5600.0	830.3	28.5	2.2	18.4	955.8	677.7	145.4	12.4	1.000243
5700.0	827.4	28.2	2.0	18.4	953.4	677.4	146.6	12.7	1.000242
5800.0	824.6	28.0	1.8	18.5	951.0	677.1	147.8	12.9	1.000241
5900.0	821.8	27.7	1.6	18.5	948.6	676.8	148.8	12.6	1.000240
6000.0	818.9	27.4	1.5	18.6	946.2	676.5	149.8	12.3	1.000239
6100.0	816.1	27.2	1.3	18.6	943.8	676.2	150.9	12.0	1.000239
6200.0	813.3	26.9	1.1	18.7	941.4	675.9	152.0	11.6	1.000238
6300.0	810.5	26.6	.9	18.8	939.0	675.5	153.2	11.3	1.000237
6400.0	807.7	26.4	.8	18.8	936.7	675.2	154.4	11.0	1.000236
6500.0	805.0	26.1	.6	18.9	934.3	674.9	155.8	10.7	1.000235
6600.0	802.2	25.8	.4	18.9	931.9	674.6	157.2	10.4	1.000234
6700.0	799.4	25.6	.2	19.0	929.6	674.3	158.7	10.1	1.000234
6800.0	796.7	25.3	.1	19.1	927.2	674.0	160.0	9.8	1.000233
6900.0	793.8	25.0	.0	19.3	924.8	673.7	160.4	9.6	1.000232
7000.0	791.0	24.7	-.0	19.6	922.4	673.4	160.8	9.5	1.000232
7100.0	788.3	24.5	-.1	19.8	920.0	673.0	161.2	9.3	1.000231
7200.0	785.5	24.2	-.1	20.1	917.6	672.7	161.6	9.1	1.000230
7300.0	782.7	23.9	-.2	20.3	915.3	672.4	162.1	9.0	1.000230
7400.0	779.9	23.6	-.3	20.6	912.9	672.1	162.5	8.8	1.000229
7500.0	777.2	23.3	-.3	20.8	910.5	671.8	163.0	8.6	1.000229
7600.0	774.5	23.1	-.4	21.0	908.2	671.5	163.5	8.5	1.000228
7700.0	771.7	22.8	-.5	21.3	905.8	671.2	164.0	8.3	1.000227
7800.0	769.0	22.5	-.5	21.5	903.5	670.8	164.5	8.1	1.000227
7900.0	766.3	22.2	-.6	21.8	901.2	670.5	164.5	8.2	1.000226

GEODETIC COORDINATES  
33.16712 LAT DEG  
106.49511 LON DEG

UPPER AIR DATA  
1730030090  
JALLEN

TABLE 11 CONT'D

STATION ALTITUDE 4051.00 FEET MSL  
22 JUNE 83 1740 MDT  
ASCENSION NO. 90

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DIRECTION (DEGREES(TN))	WIND SPEED KNOTS	INDEX OF REFRACTION
8000.0	763.6	21.9	22.0	898.8	670.2	164.2	8.4	1.000226
8100.0	760.9	21.7	22.3	896.5	669.9	164.0	8.5	1.000225
8200.0	758.2	21.4	22.5	894.2	669.6	163.8	8.6	1.000224
8300.0	755.5	21.1	22.7	891.9	669.2	163.6	8.8	1.000224
8400.0	752.9	20.8	23.0	889.6	668.4	163.4	8.9	1.000223
8500.0	750.2	20.6	23.2	887.3	668.6	163.2	9.0	1.000222
8600.0	747.6	20.3	23.5	885.0	668.3	163.0	9.2	1.000222
8700.0	744.9	20.0	23.7	882.8	668.0	162.8	9.3	1.000221
8800.0	742.3	19.7	24.0	880.5	667.6	162.6	9.4	1.000221
8900.0	739.7	19.4	24.2	878.2	667.3	162.5	9.8	1.000220
9000.0	737.1	19.2	24.4	876.0	667.0	162.3	10.1	1.000219
9100.0	734.5	18.9	24.7	873.7	666.7	162.2	10.4	1.000219
9200.0	731.9	18.6	24.9	871.5	666.4	162.1	10.7	1.000218
9300.0	729.3	18.3	25.2	869.2	666.0	162.0	11.0	1.000217
9400.0	726.7	18.1	25.4	867.0	665.7	161.9	11.3	1.000217
9500.0	724.2	17.8	25.7	864.8	665.4	161.8	11.6	1.000216
9600.0	721.6	17.5	25.9	862.6	665.1	161.7	11.9	1.000215
9700.0	719.1	17.2	26.1	860.4	664.7	161.6	12.3	1.000215
9800.0	716.5	16.9	26.4	858.2	664.4	161.1	12.6	1.000214
9900.0	714.0	16.7	26.6	856.0	664.1	160.0	12.8	1.000214
10000.0	711.5	16.4	26.9	853.8	663.8	159.0	13.1	1.000213
10100.0	709.0	16.1	27.1	851.6	663.5	158.0	13.4	1.000212
10200.0	706.5	15.8	27.4	849.4	663.1	157.0	13.7	1.000212
10300.0	704.0	15.5	27.6	847.3	662.8	156.1	14.0	1.000211
10400.0	701.5	15.3	27.9	845.1	662.5	155.2	14.3	1.000210
10500.0	699.0	15.0	28.2	842.9	662.2	154.4	14.6	1.000210
10600.0	696.5	14.7	28.7	840.6	661.8	153.6	14.9	1.000209
10700.0	693.9	14.4	29.2	838.4	661.5	152.8	15.1	1.000209
10800.0	691.4	14.2	29.7	836.1	661.2	152.0	15.3	1.000208
10900.0	688.9	13.9	30.2	833.9	660.9	151.3	15.4	1.000208
11000.0	686.4	13.6	30.7	831.7	660.6	150.6	15.6	1.000207
11100.0	683.9	13.3	31.2	829.4	660.2	149.9	15.8	1.000207
11200.0	681.4	13.0	31.7	827.2	659.9	149.2	16.0	1.000206
11300.0	678.9	12.8	32.2	825.0	659.6	148.5	16.1	1.000206
11400.0	676.4	12.5	32.7	822.8	659.3	147.8	16.3	1.000205
11500.0	673.9	12.2	33.2	820.6	659.0	147.3	16.4	1.000205
11600.0	671.5	11.9	33.6	818.4	658.6	147.1	16.4	1.000204
11700.0	669.0	11.6	34.1	816.2	658.3	146.8	16.4	1.000204
11800.0	666.6	11.4	34.6	814.0	658.0	146.6	16.4	1.000203
11900.0	664.2	11.1	35.1	811.9	657.7	146.3	16.4	1.000203

STATION ALTITUDE 4051.00 FT. T MSL  
22 JUNE 63  
ASCENSION NO. 90

UPPER AIR DATA  
1730030090  
JALLEN

TABLE 11 CONT'D

GEOMETRIC ALTITUDE ASL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC MEYER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (N) SPEED KNOTS	INDEX OF REFRACTION
12000.0	661.8	10.8	35.6	809.7	657.3	146.1	1.000202
12100.0	659.3	10.5	36.1	807.6	657.0	145.9	1.000202
12200.0	656.9	10.2	36.6	805.4	656.7	145.6	1.000201
12300.0	654.5	10.0	37.1	803.3	656.4	145.4	1.000200
12400.0	652.2	9.7	37.6	801.1	656.0	145.2	1.000200
12500.0	649.8	9.4	38.1	799.0	655.7	143.9	1.000199
12600.0	647.4	9.1	38.6	796.9	655.4	142.7	1.000199
12700.0	645.0	8.9	39.1	794.8	655.1	141.4	1.000198
12800.0	642.7	8.6	39.6	792.7	654.7	140.2	1.000198
12900.0	640.4	8.3	40.1	790.6	654.4	139.0	1.000197
13000.0	638.0	8.0	40.6	788.5	654.1	137.7	1.000197
13100.0	635.7	7.7	41.1	786.4	653.8	136.5	1.000196
13200.0	633.4	7.5	41.6	784.3	653.4	135.3	1.000195
13300.0	631.1	7.2	42.1	782.2	653.1	134.1	1.000195
13400.0	628.8	6.9	42.6	780.1	652.8	133.0	1.000194
13500.0	626.5	6.6	43.1	778.1	652.5	132.3	1.000194
13600.0	624.2	6.3	43.6	776.0	652.1	131.5	1.000193
13700.0	621.9	6.1	44.1	774.0	651.8	130.8	1.000193
13800.0	619.6	5.8	44.6	771.8	651.5	130.1	1.000192
13900.0	617.2	5.5	45.4	769.7	651.1	129.3	1.000192
14000.0	614.9	5.2	46.1	767.6	650.8	128.6	1.000191
14100.0	612.6	4.9	46.8	765.5	650.5	127.9	1.000190
14200.0	610.3	4.7	47.5	763.4	650.1	127.1	1.000190
14300.0	608.0	4.4	48.2	761.3	649.8	126.4	1.000189
14400.0	605.7	4.1	48.9	759.2	649.5	125.9	1.000189
14500.0	603.4	3.8	49.5	757.1	649.2	125.5	1.000188
14600.0	601.1	3.5	50.2	755.0	648.8	125.0	1.000188
14700.0	598.9	3.3	50.9	752.9	648.5	124.6	1.000187
14800.0	596.6	3.0	51.6	750.8	648.2	124.2	1.000187
14900.0	594.4	2.7	52.3	748.8	647.8	123.8	1.000186
15000.0	592.1	2.4	52.9	746.7	647.5	123.4	1.000186
15100.0	589.9	2.1	53.6	744.7	647.2	123.0	1.000185
15200.0	587.7	1.8	54.3	742.6	646.8	122.6	1.000184
15300.0	585.5	1.6	55.0	740.6	646.5	122.2	1.000184
15400.0	583.3	1.3	55.7	738.6	646.2	121.8	1.000183
15500.0	581.1	1.0	56.3	736.6	645.8	121.4	1.000183
15600.0	578.9	.7	57.0	734.5	645.5	121.0	1.000182
15700.0	576.7	.4	57.7	732.5	645.2	120.6	1.000182
15800.0	574.5	.2	58.4	730.5	644.8	120.2	1.000181
15900.0	572.3	-.1	59.1	728.5	644.5	119.8	1.000180

STATION ALTITUDE 4051.00 Ft. T MSL  
22 JUNE 83 1740 MDT  
ASCENSION NO. 90

UPPER AIR DATA  
1730030090  
JALLEN

GEOMETRIC COORDINATES  
33.14712 LAT DEG  
106.49511 LONG DEG

TABLE 11 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES, CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CURIC. METER	SPEED OF SOUND KIOTS	WIND DATA DIRECTION (DEGREES(TN))	SPEED KNOTS	INDEX OF REFRACTION
16000.0	570.2	-4	59.7	720.6	644.1	119.4	18.6	1.000180
16100.0	560.0	-7	60.4	724.6	643.8	119.0	18.6	1.000179
16200.0	565.9	-1.0	61.1	722.6	643.5	118.6	18.7	1.000179
16300.0	563.8	-1.2	61.0	720.6	643.1	118.2	18.8	1.000178
16400.0	561.6	-1.5	62.5	718.7	642.8	117.8	18.8	1.000178
16500.0	559.5	-1.8	63.1	716.7	642.5	117.4	18.7	1.000177
16600.0	557.4	-2.1	63.8	714.8	642.1	117.0	18.6	1.000176
16700.0	555.3	-2.4	64.5	712.8	641.8	116.5	18.5	1.000176
16800.0	553.2	-2.7	65.2	710.9	641.5	116.1	18.4	1.000175
16900.0	551.1	-2.9	65.9	709.0	641.1	115.7	18.3	1.000175
17000.0	549.1	-3.2	66.6	707.0	640.8	115.2	18.2	1.000174
17100.0	547.0	-3.5	66.5	705.1	640.4	114.8	18.1	1.000173
17200.0	544.9	-3.7	65.1	703.0	640.1	114.3	18.0	1.000172
17300.0	542.8	-4.0	63.7	701.0	639.8	113.9	18.0	1.000171
17400.0	540.7	-4.2	62.3	699.0	639.5	113.3	17.8	1.000170
17500.0	538.6	-4.4	60.9	696.9	639.2	112.5	17.6	1.000169
17600.0	536.5	-4.7	59.5	694.9	638.9	111.7	17.4	1.000168
17700.0	534.4	-4.9	58.1	692.9	638.6	110.9	17.2	1.000167
17800.0	532.4	-5.2	56.7	690.9	638.3	110.2	17.0	1.000166
17900.0	530.3	-5.4	55.3	688.9	638.0	109.2	16.9	1.000165
18000.0	528.3	-5.6	53.9	686.9	637.7	108.3	16.7	1.000164
18100.0	526.3	-5.9	52.5	684.9	637.4	107.4	16.5	1.000164
18200.0	524.2	-6.1	51.1	682.9	637.1	106.5	16.3	1.000163
18300.0	522.2	-6.3	51.2	680.9	636.8	105.5	16.1	1.000162
18400.0	520.2	-6.5	56.1	678.5	636.7	104.6	16.0	1.000162
18500.0	518.2	-6.6	61.0	676.2	636.5	103.6	15.9	1.000163
18600.0	516.1	-6.8	66.0	673.9	636.4	102.7	15.8	1.000163
18700.0	514.1	-7.0	68.5	671.7	636.2	101.7	15.8	1.000163
18800.0	512.1	-7.2	67.3	669.5	635.9	100.7	15.7	1.000162
18900.0	510.1	-7.3	66.2	667.4	635.7	99.7	15.7	1.000161
19000.0	508.2	-7.5	65.0	665.3	635.5	98.7	15.6	1.000160
19100.0	506.2	-7.7	63.8	663.2	635.2	97.7	15.6	1.000159
19200.0	504.2	-7.9	62.6	661.1	635.0	96.7	15.5	1.000159
19300.0	502.2	-8.1	61.4	659.1	634.7	95.7	15.5	1.000158
19400.0	500.3	-8.3	60.2	657.0	634.5	94.7	15.5	1.000157
19500.0	498.3	-8.4	55.1	654.9	634.3	94.1	15.7	1.000156
19600.0	496.4	-8.6	49.3	652.8	634.0	93.5	16.0	1.000154
19700.0	494.4	-8.8	43.6	650.8	633.8	93.0	16.3	1.000152
19800.0	492.5	-8.9	37.9	648.7	633.6	92.6	16.5	1.000151
19900.0	490.6	-9.1	32.1	646.7	633.3	92.1	16.8	1.000149

STATION ALTITUDE 4051.00 FEET NSL  
22 JUNE 83 1740 MDT  
ASCENSION NO. 90

UPPER AIR DATA  
1730030090  
JALLEN

GEODETTIC COORDINATES  
33.14712 LAT DEG  
106.49511 LON DEG

TABLE 11 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	TEMPERATURE DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> METR	SPEED OF SOUND KNOTS	DIRECTION WIND DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
20000.0	400.6	-9.2	-25.0	26.4	644.6	633.1	91.7	17.1	1.000148
20100.0	406.7	-9.6	-27.8	20.7	642.8	632.8	91.2	17.4	1.000146
20200.0	404.8	-9.6	-29.8	17.3	640.5	632.6	90.8	17.7	1.000145
20300.0	402.9	-9.8	-29.5	18.2	638.6	632.3	90.4	18.0	1.000145
20400.0	401.0	-10.1	-29.2	19.0	636.6	632.0	90.0	18.3	1.000145
20500.0	479.1	-10.3	-29.0	19.9	634.7	631.7	90.5	18.5	1.000144
20600.0	477.2	-10.6	-28.7	20.7	632.8	631.4	91.0	18.6	1.000144
20700.0	475.3	-10.8	-28.5	21.6	630.8	631.2	91.5	18.8	1.000144
20800.0	473.4	-11.0	-28.3	22.5	628.9	630.9	92.0	18.9	1.000143
20900.0	471.6	-11.3	-28.1	23.3	627.0	630.6	92.5	19.1	1.000143
21000.0	469.7	-11.5	-27.9	24.2	625.1	630.3	92.9	19.3	1.000143
21100.0	467.8	-11.8	-27.7	25.0	623.2	630.0	93.4	19.4	1.000142
21200.0	466.0	-12.0	-27.6	25.9	621.3	629.7	93.8	19.6	1.000142
21300.0	464.2	-12.2	-27.4	26.8	619.4	629.4	94.3	19.8	1.000142
21400.0	462.3	-12.5	-27.3	27.6	617.6	629.1	94.6	19.7	1.000141
21500.0	460.5	-12.8	-27.0	28.9	615.7	628.8	94.9	19.4	1.000141
21600.0	458.6	-13.0	-26.7	30.6	613.9	628.5	95.2	19.2	1.000141
21700.0	456.8	-13.3	-26.3	32.3	612.1	628.2	95.5	18.9	1.000140
21800.0	455.0	-13.6	-26.0	34.0	610.3	627.8	95.8	18.6	1.000140
21900.0	453.2	-13.9	-25.8	35.7	608.5	627.5	96.2	18.4	1.000140
22000.0	451.3	-14.2	-25.5	37.4	606.7	627.1	96.5	18.1	1.000139
22100.0	449.5	-14.4	-25.3	39.1	604.9	626.8	96.8	17.8	1.000139
22200.0	447.7	-14.7	-25.1	40.8	603.2	626.5	97.2	17.6	1.000139
22300.0	445.9	-15.0	-24.9	42.5	601.4	626.1	97.6	17.3	1.000139
22400.0	444.2	-15.3	-24.7	44.2	599.6	625.8	97.4	16.9	1.000138
22500.0	442.4	-15.6	-24.6	45.9	597.9	625.5	97.2	16.5	1.000138
22600.0	440.6	-15.9	-24.4	47.5	596.1	625.1	97.0	16.1	1.000138
22700.0	438.9	-16.1	-24.0	51.0	594.2	624.9	96.8	15.7	1.000137
22800.0	437.1	-15.8	-20.9	65.1	591.2	625.2	96.6	15.3	1.000138
22900.0	435.3	-15.8	-19.4	73.5	588.6	625.3	96.3	14.9	1.000139
23000.0	433.6	-16.0	-19.4	74.6	586.6	625.1	96.1	14.5	1.000138
23100.0	431.8	-16.1	-19.4	75.8	584.7	624.9	95.8	14.1	1.000138
23200.0	430.1	-16.3	-19.4	76.9	582.7	624.7	95.5	13.8	1.000137
23300.0	428.4	-16.5	-19.4	78.0	580.8	624.5	95.8	13.4	1.000137
23400.0	426.6	-16.7	-19.6	77.7	578.8	624.3	96.6	13.1	1.000136
23500.0	424.9	-16.8	-19.8	77.4	576.9	624.0	97.5	12.8	1.000136
23600.0	423.2	-17.0	-20.1	77.1	574.9	623.8	98.4	12.5	1.000135
23700.0	421.5	-17.2	-20.3	76.8	573.0	623.6	99.4	12.2	1.000135
23800.0	419.7	-17.4	-20.5	76.5	571.1	623.4	100.4	11.9	1.000134
23900.0	418.0	-17.5	-20.7	76.2	569.1	623.2	101.5	11.6	1.000134

GEODETIC COORDINATES  
33.16712 LAT DEG  
106.49511 LON DEG

UPPER AIR DATA  
1730030090  
JALLEN

STATION ALTITUDE 4051.00 FEET MSL  
22 JUNE 83 1740 MDT  
ASCENSION NO. 90

TABLE 11 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (DEGREES(TN))	SPEED KNOTS	INDEX OF REFRACTION
24000.0	410.4	-17.7	75.9	567.2	623.0	102.6	11.3	1.000133
24100.0	414.7	-17.9	75.6	565.3	622.8	103.8	11.0	1.000133
24200.0	415.0	-18.0	75.3	563.4	622.5	105.1	10.7	1.000132
24300.0	411.3	-18.2	75.0	561.5	622.3	106.0	10.4	1.000131
24400.0	409.6	-18.4	74.7	559.9	622.1	106.9	10.2	1.000131
24500.0	408.0	-18.6	74.4	557.7	621.9	107.9	9.9	1.000130
24600.0	406.3	-18.7	74.1	555.8	621.7	108.9	9.7	1.000130
24700.0	404.7	-18.9	73.8	554.0	621.5	109.9	9.5	1.000129
24800.0	403.0	-19.1	73.6	552.1	621.3	111.0	9.2	1.000129
24900.0	401.4	-19.3	73.3	550.3	621.0	113.2	8.9	1.000128
25000.0	399.1	-19.6	72.6	548.4	620.7	114.6	8.5	1.000127
25100.0								
25200.0	396.5	-19.7	72.2	544.5	620.5	116.0	8.3	1.000127
25300.0	394.9	-19.8	71.8	542.6	620.3	117.1	8.1	1.000126
25400.0	393.3	-20.0	71.4	540.7	620.2	117.8	7.8	1.000126
25500.0	391.7	-20.1	71.0	538.8	620.0	118.5	7.5	1.000125
25600.0	390.1	-20.3	68.8	537.0	619.7	119.3	7.2	1.000125
25700.0	388.5	-20.5	66.5	535.3	619.4	120.2	6.9	1.000124
25800.0	386.9	-20.8	64.3	533.6	619.1	121.1	6.7	1.000123
25900.0	385.3	-21.0	62.1	531.9	618.9	122.1	6.4	1.000123
26000.0	383.7	-21.2	61.5	530.3	618.5	123.2	6.1	1.000122
26100.0	382.1	-21.5	62.7	528.6	618.2	124.5	5.8	1.000122
26200.0	380.5	-21.8	63.8	527.0	617.9	125.8	5.6	1.000121
26300.0	379.0	-22.1	64.9	525.4	617.5	127.2	5.3	1.000121
26400.0	377.4	-22.3	66.0	523.8	617.2	127.4	5.0	1.000121
26500.0	375.8	-22.6	67.1	522.2	616.9	127.6	4.8	1.000120
26600.0	374.3	-22.9	68.2	520.6	616.5	127.8	4.5	1.000120
26700.0	372.7	-23.1	69.3	519.1	616.2	128.0	4.2	1.000120
26800.0	371.2	-23.4	70.4	517.5	615.9	128.2	4.0	1.000119
26900.0	369.7	-23.7	71.5	515.9	615.5	128.5	3.7	1.000119
27000.0	368.1	-24.0	72.6	514.3	615.2	128.8	3.5	1.000118
27100.0	366.6	-24.2	73.7	512.8	614.8	129.1	3.2	1.000118
27200.0	365.1	-24.5	74.8	511.2	614.5	129.5	2.9	1.000118
27300.0	363.6	-24.8	75.9	509.7	614.2	130.0	2.7	1.000117
27400.0	362.0	-25.0	75.8	508.0	613.8	129.8	2.5	1.000117
27500.0	360.5	-25.3	75.6	506.4	613.5	128.7	2.4	1.000116
27600.0	359.0	-25.5	75.3	504.7	613.2	127.6	2.4	1.000116
27700.0	357.4	-25.8	75.1	503.1	612.9	126.3	2.3	1.000116
27800.0	355.9	-26.0	74.9	501.4	612.6	125.0	2.2	1.000115
27900.0	354.4	-26.3	74.7	499.8	612.3	123.7	2.2	1.000115

STATION ALTITUDE 4051.00 FEET MSL  
22 JUNE 03 1740 MDT  
ASCENSION NO. 90

UPPER AIR DATA  
1730030090  
JALLEN

TABLE 11 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE C	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DIRECTION (DEGREES TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
28000.0	352.9	-26.5	74.5	491.2	612.0	122.2	2.1	1.000114
28100.0	351.4	-26.8	74.2	490.6	611.7	120.7	2.1	1.000114
28200.0	349.9	-27.0	74.0	489.0	611.3	119.1	2.0	1.000113
28300.0	348.4	-27.3	73.8	487.4	611.0	117.4	2.0	1.000113
28400.0	346.9	-27.5	73.6	485.8	610.7	116.1	1.9	1.000112
28500.0	345.4	-27.8	73.3	484.2	610.4	116.3	2.0	1.000112
28600.0	344.0	-28.0	73.1	482.6	610.1	116.4	2.0	1.000112
28700.0	342.5	-28.3	72.9	481.0	609.8	116.5	2.0	1.000111
28800.0	341.0	-28.5	72.7	479.4	609.5	116.7	2.1	1.000111
28900.0	339.6	-28.8	72.5	477.8	609.2	116.8	2.1	1.000110
29000.0	338.1	-29.0	72.2	476.2	608.8	116.9	2.2	1.000110
29100.0	336.7	-29.3	72.0	474.6	608.5	117.0	2.2	1.000110
29200.0	335.3	-29.5	71.8	473.0	608.2	117.1	2.2	1.000109
29300.0	333.8	-29.8	71.6	471.4	607.9	117.2	2.3	1.000109
29400.0	332.4	-30.0	71.3	469.8	607.6	117.3	2.3	1.000108
29500.0	331.0	-30.3	71.1	468.2	607.3	118.5	2.4	1.000108
29600.0	329.6	-30.5	70.9	466.6	607.0	119.9	2.4	1.000108
29700.0	328.2	-30.8	70.7	465.0	606.6	121.3	2.5	1.000107
29800.0	326.8	-31.0	70.5	463.4	606.3	122.6	2.5	1.000107
29900.0	325.4	-31.3	70.2	461.8	606.0	123.8	2.6	1.000106
30000.0	324.0	-31.5	70.0	460.2	605.7	125.0	2.6	1.000106
30100.0	322.6	-31.8	69.8	458.6	605.4	126.1	2.7	1.000106
30200.0	321.2	-32.0	69.6	457.0	605.1	127.2	2.7	1.000105
30300.0	319.9	-32.3	69.3	455.4	604.8	128.3	2.8	1.000105
30400.0	318.5	-32.5	69.1	453.8	604.4	129.3	2.8	1.000104
30500.0	317.2	-32.8	68.9	452.2	604.1	131.6	2.9	1.000104
30600.0	315.8	-33.0	68.7	450.6	603.8	136.0	3.0	1.000104
30700.0	314.5	-33.3	68.5	449.0	603.5	140.2	3.1	1.000103
30800.0	313.1	-33.5	68.2	447.4	603.2	144.1	3.2	1.000103
30900.0	311.8	-33.8	68.0	445.8	602.9	147.8	3.3	1.000103
31000.0	310.4	-34.0	67.8	444.2	602.5	151.1	3.4	1.000102
31100.0	309.1	-34.3	67.6	442.6	602.2	154.3	3.6	1.000102
31200.0	307.8	-34.5	67.3	441.0	601.9	157.2	3.7	1.000102
31300.0	306.5	-34.8	67.1	439.4	601.6	159.8	3.9	1.000101
31400.0	305.2	-35.0	66.9	437.8	601.3	162.2	4.0	1.000101
31500.0	303.9	-35.2	66.7	436.2	601.0	164.5	4.2	1.000100
31600.0	302.6	-35.5	66.4	434.6	600.6	166.4	4.3	1.000100
31700.0	301.3	-35.7	66.2	433.0	600.3	168.1	4.4	1.000100
31800.0	300.0	-36.0	66.0	431.4	600.0	169.8	4.5	1.000099
31900.0	298.7	-36.2	66.9	429.8	599.7	171.4	4.5	1.000099

STATION ALTITUDE 4051.00 FEET MSL  
22 JUNE 83 1740 MDT  
ASCENSION NO. 00

UPPER AIR DATA  
1730030090  
JALLEN

GEODETIC COORDINATES  
33.14712 LAT DEG  
106.49511 LONG DEG

TABLE 11 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (DEGREES(TN))	SPEED KNOTS	INDEX OF REFRACTION
32000.0	297.4	-36.5	67.9	437.0	599.4	172.9	4.6	1.000099
32100.0	296.1	-36.7	68.8	436.1	599.1	174.4	4.7	1.000098
32200.0	294.8	-36.9	69.8	434.6	598.8	175.8	4.8	1.000098
32300.0	293.5	-37.2	70.7	433.2	598.5	177.2	4.9	1.000098
32400.0	292.2	-37.4	71.7	431.7	598.2	178.6	4.9	1.000097
32500.0	290.9	-37.6	72.6	430.2	597.9	179.9	5.0	1.000097
32600.0	289.7	-37.9	73.6	428.8	597.6	181.1	5.1	1.000097
32700.0	288.4	-38.1	74.6	427.3	597.4	179.3	5.3	1.000096
32800.0	287.1	-38.4	73.8	426.1	596.9	176.6	5.5	1.000096
32900.0	285.9	-38.9	71.5	425.0	596.3	174.0	5.6	1.000096
33000.0	284.6	-39.2	69.1**	423.7	595.9	171.6	5.8	1.000095
33100.0	283.3	-39.5	66.7**	422.2	595.6	169.4	6.0	1.000095
33200.0	282.0	-39.7	64.3**	420.8	595.3	167.3	6.2	1.000095
33300.0	280.8	-40.0	61.9**	419.4	595.0	165.4	6.5	1.000094
33400.0	279.5	-40.2	59.5**	418.0	594.6	163.6	6.7	1.000094
33500.0	278.3	-40.5	57.1**	416.5	594.3	161.9	6.9	1.000093
33600.0	277.0	-40.7	54.7**	415.1	594.0	160.3	7.2	1.000093
33700.0	275.8	-41.0	52.3**	413.7	593.6	158.9	7.4	1.000093
33800.0	274.5	-41.2	49.9**	412.3	593.3	157.7	7.6	1.000092
33900.0	273.3	-41.5	47.5**	410.9	593.0	156.5	7.9	1.000092
34000.0	272.1	-41.7	45.1**	409.5	592.7	155.4	8.1	1.000092
34100.0	270.8	-42.0	42.7**	408.1	592.3	154.4	8.3	1.000091
34200.0	269.6	-42.2	40.3**	406.7	592.0	153.4	8.6	1.000091
34300.0	268.4	-42.5	37.9**	405.4	591.7	152.5	8.8	1.000091
34400.0	267.2	-42.7	35.5**	404.0	591.4	151.6	9.1	1.000090
34500.0	266.0	-43.0	33.1**	402.6	591.0	150.8	9.3	1.000090
34600.0	264.8	-43.3	30.7**	401.3	590.7	150.0	9.6	1.000090
34700.0	263.6	-43.5	28.3**	399.9	590.4	149.5	9.8	1.000089
34800.0	262.4	-43.8	25.9**	398.5	590.0	149.2	10.0	1.000089
34900.0	261.3	-44.0	23.5**	397.2	589.7	148.9	10.2	1.000089
35000.0	260.1	-44.3	21.1**	395.9	589.4	148.7	10.3	1.000088
35100.0	258.9	-44.5	18.7**	394.5	589.1	148.4	10.5	1.000088
35200.0	257.8	-44.8	16.3**	393.2	588.7	148.1	10.7	1.000088
35300.0	256.6	-45.0	13.9**	391.9	588.4	147.9	10.9	1.000087
35400.0	255.5	-45.3	11.5**	390.5	588.1	147.7	11.1	1.000087
35500.0	254.3	-45.5	9.1**	389.2	587.8	147.4	11.3	1.000087
35600.0	253.2	-45.8	6.7**	387.9	587.4	147.2	11.5	1.000086
35700.0	252.0	-46.0	4.3**	386.6	587.1	147.2	11.7	1.000086
35800.0	250.9	-46.3	1.9**	385.3	586.8	147.4	11.9	1.000086
35900.0	249.8	-46.5		384.0	586.4	147.6	12.1	1.000086

\*\* AT LAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL  
22 JUNE 83 1740 MDT

ASCENSION NO. 90

UPPER AIR DATA  
1730030090  
JALLEN

GEODETIC COORDINATES  
33.1671° LAT DEG  
106.4951° LON DEG

TABLE 11 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> METER	SPEED OF SOUND KIOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE						
36000.0	248.6	-46.8			382.6	586.1	147.8	12.4	1.000085
36100.0	247.5	-47.0			381.2	505.8	148.0	12.6	1.000085
36200.0	246.3	-47.3			379.9	585.5	148.2	12.8	1.000085
36300.0	245.2	-47.5			378.5	585.2	148.4	13.0	1.000084
36400.0	244.0	-47.7			377.1	584.9	148.6	13.2	1.000084
36500.0	242.8	-48.0			375.8	584.6	148.9	13.3	1.000084
36600.0	241.6	-48.2			374.4	584.3	149.0	13.7	1.000083
36700.0	240.6	-48.5			373.1	584.0	149.0	13.9	1.000083
36800.0	239.5	-48.7			371.8	583.7	148.9	13.9	1.000083
36900.0	238.4	-48.9			370.4	583.4	148.7	13.8	1.000083
37000.0	237.3	-49.2			369.1	583.0	148.5	13.8	1.000082
37100.0	236.2	-49.4			367.8	582.7	148.3	13.7	1.000082
37200.0	235.1	-49.6			366.5	582.4	148.1	13.6	1.000082
37300.0	234.0	-49.9			365.2	582.1	147.9	13.6	1.000081
37400.0	232.9	-50.1			363.9	581.8	147.7	13.5	1.000081
37500.0	231.9	-50.4			362.6	581.5	147.5	13.4	1.000081
37600.0	230.8	-50.6			361.3	581.2	147.3	13.4	1.000080
37700.0	229.7	-50.8			360.0	580.9	147.1	13.3	1.000080
37800.0	228.7	-51.1			358.7	580.6	146.8	13.2	1.000080
37900.0	227.6	-51.3			357.4	580.2	146.4	13.1	1.000080
38000.0	226.5	-51.5			356.1	579.9	145.9	13.1	1.000079
38100.0	225.5	-51.8			354.9	579.6	145.4	13.0	1.000079
38200.0	224.4	-52.0			353.6	579.3	144.9	12.9	1.000079
38300.0	223.4	-52.3			352.3	579.0	144.4	12.8	1.000078
38400.0	222.4	-52.5			351.1	578.7	143.9	12.7	1.000078
38500.0	221.3	-52.7			349.8	578.4	143.4	12.7	1.000078
38600.0	220.3	-53.0			348.6	578.1	142.9	12.6	1.000078
38700.0	219.3	-53.2			347.3	577.8	142.3	12.5	1.000077
38800.0	218.3	-53.5			346.1	577.4	141.8	12.4	1.000077
38900.0	217.3	-53.7			344.9	577.1	143.6	12.5	1.000077
39000.0	216.2	-53.9			343.5	576.9	146.2	12.7	1.000077
39100.0	215.2	-54.0			342.1	576.8	148.7	12.9	1.000076
39200.0	214.2	-54.1			340.6	576.6	151.1	13.1	1.000076
39300.0	213.2	-54.2			339.2	576.5	153.5	13.4	1.000076
39400.0	212.2	-54.3			337.7	576.3	155.7	13.7	1.000075
39500.0	211.2	-54.4			336.3	576.2	157.9	13.9	1.000075
39600.0	210.2	-54.5			334.9	576.0	159.9	14.3	1.000075
39700.0	209.2	-54.6			333.5	575.9	161.9	14.6	1.000074
39800.0	208.2	-54.8			332.1	575.7	163.8	14.9	1.000074
39900.0	207.2	-54.9			330.7	575.6	165.8	15.3	1.000074

STATION ALTITUDE 4051.00 FEET MSL  
22 JUNE 83  
ASCENSION NO. 90

1740 MDT

UPPER AIR DATA  
1730030090  
JALLEN

GEODETIC COORDINATES  
33.16712 LAT DEG  
106.49511 LON DEG

TABLE 11 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> MET <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (DEGREES(TN))	SPEED KNOTS	INDEX OF REFRACTION
40000.0	200.2	-55.0		329.3	575.4	168.3	15.5	1.000073
40100.0	205.2	-55.1		327.9	575.3	170.7	15.8	1.000073
40200.0	204.3	-55.2		326.5	575.1	173.0	16.2	1.000073
40300.0	203.3	-55.3		325.1	575.0	175.1	16.5	1.000072
40400.0	202.3	-55.4		323.8	574.8	177.2	16.9	1.000072
40500.0	201.4	-55.5		322.4	574.7	179.2	17.3	1.000072
40600.0	200.4	-55.6		321.0	574.5	181.2	17.8	1.000071
40700.0	199.5	-55.7		319.6	574.5	183.0	18.2	1.000071
40800.0	197.6	-55.7		318.1	574.4	184.7	18.7	1.000071
40900.0	195.6	-55.8		316.6	574.4	186.3	19.1	1.000070
41000.0	193.6	-55.8		315.2	574.3	186.5	19.0	1.000070
41100.0	191.6	-55.9		313.7	574.3	186.5	18.9	1.000070
41200.0	194.8	-55.9		312.3	574.3	186.5	18.9	1.000069
41300.0	193.9	-55.9		310.8	574.2	186.5	18.8	1.000069
41400.0	192.9	-55.9		309.4	574.2	186.5	18.7	1.000069
41500.0	192.0	-55.9		307.9	574.2	186.5	18.6	1.000068
41600.0	191.1	-56.0		306.5	574.1	186.5	18.5	1.000068
41700.0	190.2	-56.0		305.1	574.1	186.5	18.5	1.000067
41800.0	189.3	-56.0		303.7	574.1	186.4	18.7	1.000067
41900.0	188.4	-56.1		302.3	574.0	186.2	18.9	1.000067
42000.0	187.5	-56.1		300.9	574.0	185.9	19.1	1.000066
42100.0	186.6	-56.1		299.5	574.0	185.7	19.3	1.000066
42200.0	185.7	-56.1		298.0	574.0	185.5	19.5	1.000065
42300.0	184.8	-56.0		296.6	574.0	184.8	20.0	1.000065
42400.0	183.9	-56.0		295.1	574.1	184.6	20.2	1.000065
42500.0	183.1	-56.0		293.7	574.1	184.4	20.4	1.000064
42600.0	182.2	-56.0		292.3	574.1	185.2	20.8	1.000064
42700.0	181.3	-55.9		290.8	574.2	185.9	21.2	1.000064
42800.0	180.5	-55.9		289.4	574.2	186.7	21.6	1.000064
42900.0	179.6	-55.9		288.0	574.2	187.4	22.0	1.000063
43000.0	178.8	-55.8		286.6	574.3	188.1	22.4	1.000063
43100.0	177.9	-55.8		285.2	574.3	188.8	22.8	1.000063
43200.0	177.1	-55.8		283.8	574.3	189.5	23.3	1.000062
43300.0	176.2	-55.7		282.4	574.4	190.1	24.1	1.000062
43400.0	175.4	-55.7		281.0	574.4	190.7	24.5	1.000061
43500.0	174.6	-55.7		279.7	574.5	191.3	24.9	1.000061
43600.0	173.7	-55.7		278.3	574.5	191.9		
43700.0	172.9	-55.7		276.9	574.5			
43800.0	172.1	-55.6		275.6	574.6			
43900.0	171.3	-55.6		274.3	574.6			

STATION ALTITUDE 4051.00 FEET MSL  
22 JUNE 83 1740 PDT  
ASCENSION IS. 90

UPPER AIR DATA  
1730030090  
JALLEN

GEOGRAPHIC COORDINATES  
33.16712 LAT DEG  
106.49511 LON DEG

TABLE 11 CONT'D

GEOMETRIC ALTITUDE	PRESSURE	TEMPERATURE AIR	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND	WIND DIRECTION DEGREES (TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
MSL FEET	MILLIBARS	DEGREES	CENTIGRADE	METER	KNOTS			
44000.0	170.4	-55.6		272.9	574.6	192.4	25.3	1.000061
44100.0	169.6	-55.6		271.6	574.7	193.0	25.7	1.000060
44200.0	168.8	-55.5		270.3	574.7	193.5	26.1	1.000060
44300.0	168.0	-55.5		268.9	574.7	194.0	26.5	1.000060
44400.0	167.2	-55.5		267.6	574.8	194.5	26.9	1.000060
44500.0	166.4	-55.4		266.3	574.8	195.0	27.3	1.000059
44600.0	165.6	-55.4		265.0	574.9	195.5	27.7	1.000059
44700.0	164.9	-55.4		263.8	574.8	195.9	28.1	1.000059
44800.0	164.1	-55.5		262.6	574.7	196.2	28.3	1.000058
44900.0	163.3	-55.6		261.3	574.6	196.4	28.4	1.000058
45000.0	162.5	-55.7		260.3	574.5	196.5	28.5	1.000058
45100.0	161.7	-55.8		259.2	574.4	196.7	28.5	1.000058
45200.0	161.0	-55.9		258.1	574.3	196.8	28.5	1.000057
45300.0	160.2	-55.9		257.0	574.2	197.0	28.6	1.000057
45400.0	159.4	-56.0		255.8	574.0	197.2	28.6	1.000057
45500.0	158.7	-56.1		254.7	573.9	197.3	28.6	1.000057
45600.0	157.9	-56.2		253.6	573.8	197.5	28.7	1.000056
45700.0	157.2	-56.3		252.5	573.7	197.7	28.7	1.000056
45800.0	156.4	-56.4		251.4	573.6	197.0	28.2	1.000056
45900.0	155.7	-56.5		250.3	573.4	196.0	27.6	1.000056
46000.0	154.9	-56.6		249.3	573.3	195.0	26.9	1.000056
46100.0	154.2	-56.7		248.2	573.1	193.9	26.3	1.000055
46200.0	153.5	-56.8		247.2	573.0	192.8	25.6	1.000055
46300.0	152.7	-57.0		246.1	572.8	191.7	25.0	1.000055
46400.0	152.0	-57.1		245.1	572.7	190.5	24.4	1.000055
46500.0	151.3	-57.2		244.0	572.5	189.2	23.8	1.000054
46600.0	150.6	-57.3		243.0	572.3	187.9	23.2	1.000054
46700.0	149.8	-57.5		242.0	572.2	186.4	22.6	1.000054
46800.0	149.1	-57.7		241.1	571.8	184.8	22.1	1.000054
46900.0	148.4	-57.9		240.2	571.5	182.9	21.6	1.000053
47000.0	147.6	-58.2		239.3	571.2	181.0	21.1	1.000053
47100.0	146.9	-58.4		238.4	570.9	179.0	20.6	1.000053
47200.0	146.2	-58.7		237.5	570.6	177.0	20.2	1.000053
47300.0	145.5	-58.9		236.6	570.2	174.8	19.8	1.000053
47400.0	144.8	-59.1		235.7	569.9	172.5	19.4	1.000052
47500.0	144.1	-59.4		234.8	569.6	170.2	19.0	1.000052
47600.0	143.4	-59.6		233.9	569.3	167.7	18.7	1.000052
47700.0	142.7	-59.9		233.0	569.0	165.2	18.4	1.000052
47800.0	142.0	-60.1		232.1	568.6	163.4	18.3	1.000052
47900.0	141.3	-60.3		231.3	568.3	162.5	18.4	1.000051

STATION ALTITUDE 4051.00 FEET MSL  
22 JUNE 83  
ASCENSION NO. 90

UPPER AIR DATA  
1730030090  
JALLEN

GEODETIC COORDINATES  
33.12712 LAT DEG  
106.49511 LON DEG

1740 MDT

TABLE 11 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUMIDITY PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
48000.0	140.6	-60.6		230.4	560.0	161.6	18.4	1.000051
48100.0	139.9	-60.8		229.5	567.7	160.6	18.5	1.000051
48200.0	139.2	-61.1		228.7	567.4	159.7	18.5	1.000051
48300.0	138.5	-61.3		227.8	567.0	158.8	18.6	1.000051
48400.0	137.9	-61.5		226.9	566.7	157.9	18.7	1.000051
48500.0	137.2	-61.8		226.1	566.4	157.0	18.8	1.000050
48600.0	136.5	-62.0		225.2	566.1	156.1	18.9	1.000050
48700.0	135.8	-62.3		224.4	565.7	155.2	19.0	1.000050
48800.0	135.2	-62.5		223.6	565.4	154.5	19.1	1.000050
48900.0	134.5	-62.7		222.7	565.1	154.6	19.2	1.000050
49000.0	133.9	-63.0		221.9	564.8	154.8	19.4	1.000049
49100.0	133.2	-63.2		221.1	564.5	154.9	19.6	1.000049
49200.0	132.6	-63.5		220.2	564.1	155.1	19.7	1.000049
49300.0	131.9	-63.7		219.4	563.8	155.2	19.9	1.000049
49400.0	131.3	-63.9		218.6	563.5	155.4	20.1	1.000049
49500.0	130.6	-64.2		217.8	563.2	155.5	20.2	1.000049
49600.0	130.0	-64.4		216.9	562.8	155.6	20.4	1.000048
49700.0	129.3	-64.7		216.1	562.5	155.8	20.6	1.000048
49800.0	128.7	-64.9		215.3	562.2	155.9	20.7	1.000048
49900.0	128.1	-65.1		214.5	561.9	156.1	20.9	1.000048
50000.0	127.5	-65.4		213.7	561.5	156.4	21.0	1.000048
50100.0	126.8	-65.6		212.9	561.2	156.6	21.1	1.000047
50200.0	126.2	-65.9		212.1	560.9	156.8	21.3	1.000047
50300.0	125.6	-66.1		211.3	560.6	157.1	21.4	1.000047
50400.0	125.0	-66.3		210.5	560.3	157.3	21.6	1.000047
50500.0	124.4	-66.4		209.5	560.2	157.6	21.7	1.000047
50600.0	123.7	-66.4		208.5	560.1	157.8	21.8	1.000046
50700.0	123.1	-66.5		207.6	560.0	158.0	22.0	1.000046
50800.0	122.5	-66.6		206.6	559.9	158.2	22.1	1.000046
50900.0	121.9	-66.6		205.6	559.8	158.5	22.2	1.000046
51000.0	121.3	-66.7		204.6	559.7	158.8	22.2	1.000046
51100.0	120.7	-66.8		203.7	559.7	159.1	22.2	1.000045
51200.0	120.1	-66.8		202.7	559.6	159.4	22.2	1.000045
51300.0	119.5	-66.9		201.8	559.5	159.8	22.1	1.000045
51400.0	118.9	-67.0		200.8	559.4	160.1	22.1	1.000045
51500.0	118.3	-67.0		199.9	559.3	160.4	22.1	1.000045
51600.0	117.7	-67.1		198.9	559.2	160.7	22.1	1.000044
51700.0	117.1	-67.2		198.0	559.1	161.1	22.1	1.000044
51800.0	116.5	-67.2		197.1	559.0	161.4	22.0	1.000044
51900.0	115.9	-67.3		196.2	558.9	161.7	22.0	1.000044

STATION ALTITUDE 4051.00 FEET MSL  
22 JUNE 03 1740 MDT  
ASCENSION NO. 90

UPPER AIR DATA  
1730030090  
JALLFN

GEODETIC COORDINATES  
33.16712 LAT DEG  
106.49511 LON DEG

TABLE 11 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
52000.0	115.3	-67.4		195.2	558.9	162.2	21.7	1.000043
52100.0	114.7	-67.4		194.3	558.8	162.7	21.3	1.000043
52200.0	114.2	-67.5		193.4	558.7	163.2	20.9	1.000043
52300.0	113.6	-67.6		192.5	558.6	163.8	20.5	1.000043
52400.0	113.0	-67.6		191.6	558.5	164.3	20.2	1.000043
52500.0	112.5	-67.7		190.7	558.4	164.9	19.8	1.000042
52600.0	111.9	-67.8		189.8	558.3	165.6	19.4	1.000042
52700.0	111.3	-67.8		188.9	558.2	166.2	19.0	1.000042
52800.0	110.8	-67.9		188.0	558.1	166.9	18.6	1.000042
52900.0	110.2	-68.0		187.1	558.0	167.6	18.2	1.000042
53000.0	109.7	-68.0		186.3	558.0	168.2	17.9	1.000041
53100.0	109.1	-68.1		185.4	557.9	168.8	17.7	1.000041
53200.0	108.6	-68.2		184.5	557.8	169.3	17.4	1.000041
53300.0	108.0	-68.2		183.6	557.8	169.9	17.2	1.000041
53400.0	107.5	-68.1		182.6	557.9	170.4	17.0	1.000041
53500.0	106.9	-68.0		181.6	558.0	171.0	16.8	1.000040
53600.0	106.4	-67.9		180.6	558.1	171.6	16.6	1.000040
53700.0	105.9	-67.8		179.6	558.2	172.2	16.4	1.000040
53800.0	105.3	-67.7		178.7	558.3	172.8	16.2	1.000040
53900.0	104.8	-67.7		177.7	558.4	173.5	15.9	1.000040
54000.0	104.3	-67.6		176.7	558.6	174.1	15.7	1.000039
54100.0	103.8	-67.5		175.8	558.7	174.3	15.7	1.000039
54200.0	103.2	-67.4		174.8	558.8	173.9	15.9	1.000039
54300.0	102.7	-67.3		173.9	558.9	173.5	16.1	1.000039
54400.0	102.2	-67.3		172.9	559.0	173.1	16.3	1.000039
54500.0	101.7	-67.2		172.0	559.1	172.7	16.5	1.000038
54600.0	101.2	-67.1		171.1	559.2	172.4	16.7	1.000038
54700.0	100.7	-67.0		170.1	559.3	172.0	16.9	1.000038
54800.0	100.2	-66.9		169.2	559.5	171.7	17.1	1.000038
54900.0	99.7	-66.9		168.4	559.5	171.3	17.3	1.000037
55000.0	99.2	-66.9		167.5	559.5	171.0	17.5	1.000037
55100.0	98.7	-66.9		166.7	559.4	170.7	17.7	1.000037
55200.0	98.2	-67.0		165.9	559.4	170.7	17.7	1.000037
55300.0	97.7	-67.0		165.1	559.4	171.0	17.5	1.000037
55400.0	97.2	-67.0		164.2	559.4	171.2	17.4	1.000037
55500.0	96.7	-67.0		163.4	559.4	171.5	17.3	1.000036
55600.0	96.2	-67.0		162.6	559.3	171.7	17.1	1.000036
55700.0	95.7	-67.0		161.8	559.3	172.0	17.0	1.000036
55800.0	95.3	-67.0		161.0	559.3	172.3	16.9	1.000036
55900.0	94.8	-67.1		160.2	559.3	172.6	16.7	1.000036

STATION ALTITUDE 4951.00 FEET ASL  
 22 JUNE 83 1740 MDT  
 ASCENSION NO. 0

UPPER AIR DATA  
 17300J0090  
 JALLEN

GEODETIC COORDINATES  
 33-14-712 LAT DEG  
 106-49-511 LON DEG

TABLE 11 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUMIDITY PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
56000.0	94.3	-67.1		159.4	559.3	172.9	16.6	1.000036
56100.0	93.8	-67.1		158.6	559.2	173.1	16.5	1.000035
56200.0	93.4	-67.1		157.9	559.2	173.4	16.3	1.000035
56300.0	92.9	-67.1		157.1	559.2	173.7	15.9	1.000035
56400.0	92.4	-67.1		156.3	559.2	173.9	15.3	1.000035
56500.0	92.0	-67.1		155.5	559.2	174.1	14.8	1.000035
56600.0	91.5	-67.2		154.8	559.2	174.3	14.3	1.000034
56700.0	91.1	-67.2		154.0	559.1	174.6	13.7	1.000034
56800.0	90.6	-67.2		153.2	559.1	174.9	13.2	1.000034
56900.0	90.2	-67.2		152.5	559.1	175.2	12.7	1.000034
57000.0	89.7	-67.2		151.7	559.1	175.5	12.1	1.000034
57100.0	89.3	-67.2		151.0	559.1	175.9	11.6	1.000034
57200.0	88.8	-67.2		150.2	559.0	176.3	11.1	1.000033
57300.0	88.4	-67.2		149.5	559.0	174.4	10.8	1.000033
57400.0	87.9	-67.3		148.8	559.0	171.8	10.6	1.000033
57500.0	87.5	-67.3		148.0	559.0	169.2	10.4	1.000033
57600.0	87.0	-67.3		147.3	559.0	166.5	10.2	1.000033
57700.0	86.6	-67.2		146.5	559.0	163.7	10.0	1.000033
57800.0	86.2	-67.1		145.7	559.2	160.8	9.9	1.000032
57900.0	85.7	-67.0		144.9	559.3	157.8	9.8	1.000032
58000.0	85.3	-66.9		144.1	559.5	154.8	9.7	1.000032
58100.0	84.9	-66.8		143.3	559.6	151.8	9.7	1.000032
58200.0	84.5	-66.7		142.5	559.8	148.7	9.7	1.000032
58300.0	84.1	-66.6		141.8	559.9	147.0	9.7	1.000032
58400.0	83.6	-66.5		141.0	560.1	146.0	9.8	1.000031
58500.0	83.2	-66.3		140.2	560.2	145.0	9.9	1.000031
58600.0	82.8	-66.2		139.4	560.4	144.1	10.0	1.000031
58700.0	82.4	-66.1		138.7	560.6	143.1	10.1	1.000031
58800.0	82.0	-66.0		137.9	560.7	142.2	10.2	1.000031
58900.0	81.6	-65.9		137.1	560.9	141.3	10.3	1.000031
59000.0	81.2	-65.8		136.4	561.0	140.4	10.4	1.000030
59100.0	80.8	-65.7		135.6	561.2	139.5	10.5	1.000030
59200.0	80.4	-65.6		134.9	561.3	138.7	10.6	1.000030
59300.0	80.0	-65.4		134.2	561.5	138.5	10.6	1.000030
59400.0	79.6	-65.3		133.4	561.6	139.0	10.6	1.000030
59500.0	79.2	-65.2		132.7	561.8	139.5	10.5	1.000030
59600.0	78.8	-65.1		132.0	561.9	140.1	10.4	1.000029
59700.0	78.4	-65.0		131.2	562.1	140.6	10.4	1.000029
59800.0	78.0	-64.9		130.5	562.2	141.2	10.3	1.000029
59900.0	77.6	-64.8		129.8	562.4	141.7	10.2	1.000029

STATION ALTITUDE 4051.00 FEET MSL  
22 JUNE 83 1740 MDT  
ASCENSION NO. 90

UPPER AIR DATA  
173000Z090  
JALLEN

GEODETIC COORDINATES  
33.14712 LAT DEG  
106.49511 LON DEG

TABLE 11 CONT'D

GEOMETRIC ALTITUDE ASL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> METER	SPEED OF SOUND M/SEC	DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
60000.0	77.3	-64.6		129.1	562.5	142.3	10.2	1.000029
60100.0	76.9	-64.5		129.4	562.7	142.9	10.1	1.000029
60200.0	76.5	-64.4		127.7	562.8	143.5	10.0	1.000028
60300.0	76.1	-64.3		127.0	563.0	143.9	10.0	1.000028
60400.0	75.7	-64.2		126.3	563.1	140.8	10.1	1.000028
60500.0	75.4	-64.1		125.6	563.3	137.7	10.3	1.000028
60600.0	75.0	-64.0		124.9	563.5	134.8	10.5	1.000028
60700.0	74.6	-63.9		124.2	563.6	132.0	10.8	1.000028
60800.0	74.2	-63.7		123.5	563.8	129.3	11.0	1.000028
60900.0	73.9	-63.6		122.8	563.9	126.7	11.3	1.000027
61000.0	73.5	-63.5		122.2	564.1	124.3	11.6	1.000027
61100.0	73.2	-63.4		121.5	564.2	122.0	11.9	1.000027
61200.0	72.8	-63.3		120.8	564.4	119.8	12.3	1.000027
61300.0	72.4	-63.2		120.2	564.5	117.8	12.7	1.000027
61400.0	72.1	-63.1		119.5	564.7	115.9	13.0	1.000027
61500.0	71.7	-63.0		118.9	564.8	114.7	13.5	1.000026
61600.0	71.4	-62.8		118.2	565.0	113.7	14.0	1.000026
61700.0	71.0	-62.7		117.6	565.1	112.7	14.4	1.000026
61800.0	70.7	-62.6		116.9	565.3	111.8	14.9	1.000026
61900.0	70.3	-62.5		116.3	565.4	111.0	15.4	1.000026
62000.0	70.0	-62.4		115.6	565.6	110.2	15.9	1.000026
62100.0	69.6	-62.5		115.1	565.5	109.4	16.3	1.000026
62200.0	69.3	-62.5		114.6	565.4	108.7	16.8	1.000026
62300.0	68.9	-62.6		114.0	565.3	108.1	17.3	1.000025
62400.0	68.6	-62.6		113.5	565.3	107.4	17.8	1.000025
62500.0	68.3	-62.7		113.0	565.2	106.8	18.3	1.000025
62600.0	67.9	-62.7		112.4	565.1	107.3	18.4	1.000025
62700.0	67.6	-62.8		111.9	565.0	108.1	18.3	1.000025
62800.0	67.3	-62.8		111.4	565.0	108.9	18.2	1.000025
62900.0	66.9	-62.9		110.9	564.9	109.7	18.1	1.000025
63000.0	66.6	-62.9		110.4	564.8	110.5	18.1	1.000025
63100.0	66.3	-63.0		109.9	564.8	111.3	18.0	1.000024
63200.0	65.9	-63.1		109.3	564.7	112.2	17.9	1.000024
63300.0	65.6	-63.1		108.8	564.6	113.0	17.9	1.000024
63400.0	65.3	-63.2		108.3	564.5	113.9	17.8	1.000024
63500.0	64.9	-63.3		107.8	564.5	114.7	17.7	1.000024
63600.0	64.5	-63.3		106.8	564.3	115.7	17.7	1.000024
63700.0	64.0	-63.4		106.3	564.2	115.2	17.7	1.000024
63800.0	63.7	-63.4		105.8	564.2	114.7	17.8	1.000024
63900.0								

STATION ALTITUDE 1051.00 FT. T MSL  
22 JUNE 83 1740 MDT  
ASCENSION NO. 90

UPPER AIR DATA  
1730030090  
JALLEN

TABLE 11 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DATA (DIRECTION IN DEGREES (TN))	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
64000.0	63.4	-63.5		105.3	564.1	114.1	17.8	1.000023
64100.0	63.1	-63.5		104.9	564.0	113.6	17.9	1.000023
64200.0	62.8	-63.6		104.4	564.0	113.1	17.9	1.000023
64300.0	62.5	-63.7		103.9	563.9	112.6	17.9	1.000023
64400.0	62.2	-63.7		103.4	563.8	112.1	18.0	1.000023
64500.0	61.9	-63.6		102.8	564.0	111.5	18.0	1.000023
64600.0	61.6	-63.4		102.3	564.2	111.0	18.1	1.000023
64700.0	61.3	-63.3		101.7	564.3	110.5	18.1	1.000023
64800.0	61.0	-63.2		101.2	564.5	109.6	18.2	1.000023
64900.0	60.7	-63.1		100.6	564.6	108.3	18.2	1.000022
65000.0	60.4	-63.0		100.1	564.8	106.9	18.2	1.000022
65100.0	60.1	-62.8		99.5	565.0	105.5	18.2	1.000022
65200.0	59.8	-62.7		99.0	565.1	104.2	18.2	1.000022
65300.0	59.5	-62.6		98.4	565.3	102.8	18.3	1.000022
65400.0	59.2	-62.5		97.9	565.5	101.5	18.3	1.000022
65500.0	58.9	-62.4		97.4	565.6	100.1	18.4	1.000022
65600.0	58.6	-62.2		96.8	565.8	98.8	18.5	1.000022
65700.0	58.3	-62.1		96.3	565.9	97.5	18.6	1.000021
65800.0	58.1	-62.0		95.8	566.1	96.2	18.7	1.000021
65900.0	57.8	-61.9		95.3	566.3	95.5	18.7	1.000021
66000.0	57.5	-61.8		94.8	566.4	95.3	18.6	1.000021
66100.0	57.2	-61.6		94.2	566.6	95.1	18.5	1.000021
66200.0	56.9	-61.5		93.7	566.7	94.9	18.4	1.000021
66300.0	56.7	-61.4		93.2	566.9	94.6	18.3	1.000021
66400.0	56.4	-61.3		92.7	567.1	94.4	18.3	1.000021
66500.0	56.1	-61.2		92.2	567.2	94.2	18.2	1.000021
66600.0	55.8	-61.0		91.7	567.4	94.0	18.1	1.000020
66700.0	55.6	-60.9		91.2	567.6	93.8	18.0	1.000020
66800.0	55.3	-60.8		90.7	567.7	93.5	17.9	1.000020
66900.0	55.0	-60.7		90.2	567.9	93.3	17.9	1.000020
67000.0	54.8	-60.6		89.7	568.0	92.9	17.8	1.000020
67100.0	54.5	-60.4		89.3	568.2	92.4	17.7	1.000020
67200.0	54.2	-60.3		88.8	568.4	91.8	17.6	1.000020
67300.0	54.0	-60.2		88.3	568.5	91.3	17.5	1.000020
67400.0	53.7	-60.1		87.8	568.7	90.8	17.5	1.000020
67500.0	53.4	-60.0		87.3	568.8	90.3	17.4	1.000019
67600.0	53.2	-59.8		86.9	569.0	89.7	17.3	1.000019
67700.0	52.9	-59.7		86.4	569.2	89.2	17.2	1.000019
67800.0	52.7	-59.6		85.9	569.3	88.6	17.2	1.000019
67900.0	52.4	-59.5		85.5	569.5	88.1	17.1	1.000019

STATION ALTITUDE 4051.00 FEET MSL  
22 JUNE 83  
ASCENSION NO. 90 1740 MDT

UPPER AIR DATA  
1730030090  
JALLEN

GEODETIC COORDINATES  
33.16712 LAT DEG  
106.49511 LON DEG

TABLE 11 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DIRECTION (DEGREES (TN))	WIND SPEED KNOTS	INDEX OF REFRACTION
68000.0	52.2	-59.3		85.0	569.6	87.5	17.0	1.000019
68100.0	51.9	-59.2		84.5	569.8	86.9	17.2	1.000019
68200.0	51.7	-59.1		84.1	570.0	86.2	17.4	1.000019
68300.0	51.4	-59.0		83.6	570.1	85.6	17.7	1.000019
68400.0	51.2	-58.9		83.2	570.3	85.0	17.9	1.000019
68500.0	50.9	-58.7		82.7	570.4	84.4	18.1	1.000018
68600.0	50.7	-58.6		82.3	570.6	83.8	18.3	1.000018
68700.0	50.4	-58.5		81.8	570.8	83.3	18.6	1.000018
68800.0	50.2	-58.4		81.4	570.9	82.7	18.8	1.000018
68900.0	49.9	-58.3		80.9	571.0	82.2	19.0	1.000018
69000.0	49.7	-58.3		80.6	571.1	81.7	19.3	1.000018
69100.0	49.5	-58.2		80.2	571.1	81.2	19.5	1.000018
69200.0	49.2	-58.2		79.8	571.2	82.3	19.8	1.000018
69300.0	49.0	-58.2		79.4	571.2	83.5	20.1	1.000018
69400.0	48.7	-58.1		79.0	571.2	84.6	20.5	1.000018
69500.0	48.5	-58.1		78.6	571.3	85.7	20.8	1.000017
69600.0	48.3	-58.1		78.2	571.3	86.8	21.1	1.000017
69700.0	48.0	-58.1		77.8	571.4	87.9	21.5	1.000017
69800.0	47.8	-58.0		77.4	571.4	88.9	21.8	1.000017
69900.0	47.6	-58.0		77.1	571.4	89.9	22.2	1.000017
70000.0	47.4	-58.0		76.7	571.5	90.8	22.6	1.000017
70100.0	47.1	-57.9		76.3	571.5	91.7	22.9	1.000017
70200.0	46.9	-57.9		75.9	571.6	92.6	23.3	1.000017
70300.0	46.7	-57.9		75.5	571.6	93.4	23.6	1.000017
70400.0	46.5	-57.8		75.2	571.6	93.8	23.6	1.000017
70500.0	46.2	-57.8		74.8	571.7	94.2	23.7	1.000017
70600.0	46.0	-57.8		74.4	571.7	94.6	23.7	1.000017
70700.0	45.8	-57.7		74.1	571.8	95.0	23.7	1.000016
70800.0	45.6	-57.7		73.7	571.8	95.4	23.8	1.000016
70900.0	45.4	-57.7		73.3	571.8	95.8	23.8	1.000016
71000.0	45.1	-57.7		73.0	571.9	96.2	23.8	1.000016
71100.0	44.9	-57.6		72.6	571.9	96.6	23.9	1.000016
71200.0	44.7	-57.6		72.3	572.0	97.0	23.9	1.000016
71300.0	44.5	-57.6		71.9	572.0	97.4	24.0	1.000016
71400.0	44.3	-57.5		71.6	572.0	97.8	24.0	1.000016
71500.0	44.1	-57.5		71.2	572.1	98.0	24.0	1.000016
71600.0	43.9	-57.5		70.9	572.1	97.5	24.0	1.000016
71700.0	43.7	-57.4		70.5	572.2	97.0	23.9	1.000016
71800.0	43.4	-57.4		70.2	572.2	96.5	23.8	1.000016
71900.0	43.2	-57.4		69.8	572.2	96.0	23.8	1.000016

STATION ALTITUDE 4051.00 FEET MSL  
22 JUNE 83 1740 MDT  
ASCENSION ISO. 90

UPPER AIR DATA  
1730030090  
JALLEN

GEODETIC COORDINATES  
33.14712 LAT DEG  
106.49511 LON DEG

TABLE 11 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> MEFR	SPEED OF SOUND KNOTS	DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
72000.0	43.0	-57.4		69.5	572.3	95.5	23.7	1.000015
72100.0	42.8	-57.3		69.1	572.3	95.0	23.7	1.000015
72200.0	42.6	-57.3		68.8	572.4	94.5	23.6	1.000015
72300.0	42.4	-57.3		68.4	572.4	94.0	23.6	1.000015
72400.0	42.2	-57.2		68.1	572.4	93.5	23.5	1.000015
72500.0	42.0	-57.2		67.8	572.5	93.0	23.5	1.000015
72600.0	41.8	-57.2		67.4	572.5	92.5	23.4	1.000015
72700.0	41.6	-57.1		67.1	572.6	92.0	23.4	1.000015
72800.0	41.4	-57.1		66.8	572.6	91.2	23.1	1.000015
72900.0	41.2	-57.1		66.4	572.7	90.3	22.9	1.000015
73000.0	41.0	-57.0		66.1	572.8	89.5	22.6	1.000015
73100.0	40.8	-56.9		65.8	572.9	88.6	22.4	1.000015
73200.0	40.6	-56.8		65.4	573.0	87.7	22.2	1.000015
73300.0	40.4	-56.8		65.1	573.1	86.8	21.9	1.000014
73400.0	40.3	-56.7		64.8	573.2	85.9	21.7	1.000014
73500.0	40.1	-56.6		64.5	573.3	84.9	21.5	1.000014
73600.0	39.9	-56.6		64.1	573.4	83.9	21.3	1.000014
73700.0	39.7	-56.5		63.8	573.5	83.0	21.1	1.000014
73800.0	39.5	-56.4		63.5	573.6	82.0	20.9	1.000014
73900.0	39.3	-56.3		63.2	573.6	80.9	20.7	1.000014
74000.0	39.1	-56.3		62.8	573.7	80.7	20.7	1.000014
74100.0	38.9	-56.2		62.5	573.8	80.5	20.6	1.000014
74200.0	38.8	-56.1		62.2	573.9	80.4	20.6	1.000014
74300.0	38.6	-56.0		61.9	574.0	80.2	20.5	1.000014
74400.0	38.4	-56.0		61.6	574.1	80.1	20.5	1.000014
74500.0	38.2	-55.9		61.3	574.2	79.9	20.4	1.000014
74600.0	38.0	-55.8		61.0	574.3	79.8	20.4	1.000014
74700.0	37.9	-55.7		60.7	574.4	79.6	20.3	1.000014
74800.0	37.7	-55.7		60.3	574.5	79.5	20.3	1.000013
74900.0	37.5	-55.6		60.0	574.6	79.3	20.2	1.000013
75000.0	37.3	-55.5		59.7	574.7	79.2	20.2	1.000013
75100.0	37.1	-55.4		59.4	574.8	79.0	20.1	1.000013
75200.0	37.0	-55.4		59.1	574.9	79.4	20.2	1.000013
75300.0	36.8	-55.3		58.8	575.0	80.2	20.4	1.000013
75400.0	36.6	-55.2		58.5	575.1	81.0	20.6	1.000013
75500.0	36.5	-55.1		58.2	575.2	81.8	20.8	1.000013
75600.0	36.3	-55.1		58.0	575.3	82.5	21.0	1.000013
75700.0	36.1	-55.0		57.7	575.4	83.3	21.2	1.000013
75800.0	35.9	-54.9		57.4	575.5	84.0	21.4	1.000013
75900.0	35.8	-54.9		57.1	575.6	84.7	21.6	1.000013

STATION ALTITUDE 4051.00 FEET MSL  
22 JUNE 83 1740 MDT  
ASCENSION NO. 90

UPPER AIR DATA  
1730030090  
JALLEN

GEODETIC COORDINATES  
33.16712 LAT DEG  
106.49511 LON DEG

TABLE 11 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
76000.0	35.6	-54.8		56.8	575.7	85.4	21.8	1.000013
76100.0	35.4	-54.7		56.5	575.8	86.1	22.0	1.000013
76200.0	35.3	-54.6		56.2	575.9	86.7	22.2	1.000013
76300.0	35.1	-54.6		55.9	576.0	87.4	22.4	1.000012
76400.0	34.9	-54.5		55.7	576.1	88.0	22.7	1.000012
76500.0	34.8	-54.4		55.4	576.2	88.2	22.7	1.000012
76600.0	34.6	-54.3		55.1	576.3	88.3	22.8	1.000012
76700.0	34.4	-54.3		54.8	576.4	88.3	22.8	1.000012
76800.0	34.3	-54.2		54.5	576.5	88.3	22.9	1.000012
76900.0	34.1	-54.1		54.3	576.6	88.3	22.9	1.000012
77000.0	34.0	-54.0		54.0	576.7	88.3	23.0	1.000012
77100.0	33.8	-54.0		53.7	576.8	88.3	23.0	1.000012
77200.0	33.6	-53.9		53.4	576.9	88.3	23.0	1.000012
77300.0	33.5	-53.8		53.2	577.0	88.4	23.1	1.000012
77400.0	33.3	-53.7		52.9	577.1	88.4	23.1	1.000012
77500.0	33.2	-53.7		52.6	577.2	88.4	23.2	1.000012
77600.0	33.0	-53.6		52.4	577.3	88.4	23.2	1.000012
77700.0	32.9	-53.5		52.1	577.4	88.4	23.2	1.000012
77800.0	32.7	-53.4		51.8	577.4	88.5	23.3	1.000012
77900.0	32.5	-53.4		51.6	577.5	88.5	23.3	1.000011
78000.0	32.4	-53.3		51.3	577.6	88.6	23.3	1.000011
78100.0	32.2	-53.2		51.1	577.7	88.7	23.4	1.000011
78200.0	32.1	-53.2		50.8	577.8	88.9	23.4	1.000011
78300.0	31.9	-53.1		50.5	577.9	89.0	23.4	1.000011
78400.0	31.8	-53.0		50.3	578.0	89.1	23.4	1.000011
78500.0	31.6	-52.9		50.0	578.1	89.2	23.5	1.000011
78600.0	31.5	-52.9		49.8	578.2	89.3	23.5	1.000011
78700.0	31.3	-52.8		49.5	578.3	89.4	23.5	1.000011
78800.0	31.2	-52.7		49.3	578.4	89.5	23.5	1.000011
78900.0	31.0	-52.6		49.0	578.5	89.7	23.6	1.000011
79000.0	30.9	-52.6		48.8	578.6	89.8	23.6	1.000011
79100.0	30.7	-52.5		48.5	578.7	89.9	23.6	1.000011
79200.0	30.6	-52.4		48.3	578.8	90.0	23.6	1.000011
79300.0	30.5	-52.3		48.1	578.9	90.1	23.6	1.000011
79400.0	30.3	-52.3		47.8	579.0	90.0	23.6	1.000011
79500.0	30.2	-52.2		47.6	579.1	90.0	23.5	1.000011
79600.0	30.0	-52.1		47.3	579.2	89.9	23.5	1.000011
79700.0	29.9	-52.0		47.1	579.3	89.9	23.4	1.000010
79800.0	29.8	-51.9		46.9	579.5	89.9	23.4	1.000010
79900.0	29.6	-51.8		46.6	579.6	89.8	23.3	1.000010

STATION ALTITUDE 4051.00 FT. T MSL  
22 JUNE 83  
ASCENSION 140. 90 1740 MDT

UPPER AIR DATA  
1730030090  
JALLEN

GEODETIC COORDINATES  
33.14712 LAT DEG  
106.49511 LON DEG

TABLE 11 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL HUM. PERCENT	DENSITY GM/CM <sup>3</sup> METER	SPEED OF SOUND KNOTS	DIRECTION WIND DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
80000.0	29.5	-51.7		40.4	579.7	89.8	23.3	1.000010
80100.0	29.4	-51.6		40.2	579.9	89.8	23.2	1.000010
80200.0	29.2	-51.5		40.9	580.0	89.7	23.1	1.000010
80300.0	29.1	-51.4		40.7	580.1	89.7	23.0	1.000010
80400.0	29.0	-51.3		40.5	580.2	89.6	23.0	1.000010
80500.0	28.8	-51.2		40.2	580.4	89.6	23.0	1.000010
80600.0	28.7	-51.1		40.0	580.5	89.6	22.9	1.000010
80700.0	28.6	-51.0		40.8	580.6	89.5	22.9	1.000010
80800.0	28.4	-50.9		40.6	580.4	89.5	22.9	1.000010
80900.0	28.3	-50.8		40.3	580.9	89.5	22.9	1.000010
81000.0	28.2	-50.7		40.1	581.0	89.5	22.9	1.000010
81100.0	28.0	-50.6		40.9	581.2	89.6	22.9	1.000010
81200.0	27.9	-50.5		40.7	581.3	89.6	22.9	1.000010
81300.0	27.8	-50.4		40.5	581.4	89.6	22.9	1.000010
81400.0	27.7	-50.3		40.2	581.6	89.6	22.9	1.000010
81500.0	27.5	-50.2		40.0	581.7	89.6	22.9	1.000010
81600.0	27.4	-50.1		42.8	581.8	89.6	22.9	1.000010
81700.0	27.3	-50.0		42.0	582.0	89.6	22.9	1.000009
81800.0	27.2	-49.9		42.4	582.1	89.6	22.9	1.000009
81900.0	27.0	-49.8		42.2	582.2	89.7	22.9	1.000009
82000.0	26.9	-49.7		41.9	582.4	89.7	22.9	1.000009
82100.0	26.8	-49.6		41.7	582.5	89.7	23.0	1.000009
82200.0	26.7	-49.5		41.5	582.6	89.7	23.0	1.000009
82300.0	26.5	-49.4		41.3	582.8	89.4	22.8	1.000009
82400.0	26.4	-49.3		41.1	582.9	89.2	22.7	1.000009
82500.0	26.3	-49.2		40.9	583.0	88.9	22.6	1.000009
82600.0	26.2	-49.1		40.7	583.2	88.7	22.4	1.000009
82700.0	26.1	-49.0		40.5	583.3	88.4	22.3	1.000009
82800.0	25.9	-48.9		40.3	583.4	88.1	22.2	1.000009
82900.0	25.8	-48.8		40.1	583.6	87.9	22.1	1.000009
83000.0	25.7	-48.7		39.9	583.7	87.6	21.9	1.000009
83100.0	25.6	-48.6		39.7	583.8	87.3	21.8	1.000009
83200.0	25.5	-48.5		39.5	584.0	87.0	21.7	1.000009
83300.0	25.4	-48.4		39.3	584.1	86.8	21.6	1.000009
83400.0	25.2	-48.3		39.1	584.2	86.5	21.4	1.000009
83500.0	25.1	-48.2		38.9	584.4	86.2	21.3	1.000009
83600.0	25.0	-48.1		38.7	584.5	85.9	21.2	1.000009
83700.0	24.9	-48.0		38.5	584.6	85.8	21.2	1.000009
83800.0	24.8	-47.9		38.3	584.7	86.2	21.3	1.000009
83900.0	24.7	-47.8		38.1	584.9	86.6	21.3	1.000008

STATION ALTITUDE 4051.00 FEET MSL  
22 JUNE 83  
ASCENSION NO. 90

UPPER AIR DATA  
1730030090  
JALLEN

TABLE 11 CONT'D

GEOMETRIC ALTITUDE ASL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES	WIND SPEED KNOTS	INDEX OF REFRACTION
84000.0	24.6	-47.7		37.9	585.0	87.0	21.4	1.000008
84100.0	24.4	-47.6		37.7	585.1	87.4	21.5	1.000008
84200.0	24.3	-47.5		37.6	585.3	87.7	21.6	1.000008
84300.0	24.2	-47.4		37.4	585.4	88.1	21.7	1.000008
84400.0	24.1	-47.2		37.2	585.5	88.5	21.8	1.000008
84500.0	24.0	-47.1		37.0	585.7	88.8	21.9	1.000008
84600.0	23.9	-47.0		36.8	585.8	89.2	22.0	1.000008
84700.0	23.8	-46.9		36.6	585.9	89.6	22.1	1.000008
84800.0	23.7	-46.8		36.4	586.1	89.9	22.3	1.000008
84900.0	23.6	-46.7		36.3	586.2	90.3	22.4	1.000008
85000.0	23.5	-46.6		36.1	586.3	90.6	22.5	1.000008
85100.0	23.4	-46.5		35.9	586.5	91.0	22.6	1.000008
85200.0	23.2	-46.4		35.7	586.6	91.2	22.9	1.000008
85300.0	23.1	-46.3		35.5	586.7	91.3	23.3	1.000008
85400.0	23.0	-46.2		35.4	586.9	91.5	23.7	1.000008
85500.0	22.9	-46.1		35.2	587.0	91.6	24.1	1.000008
85600.0	22.8	-46.0		35.0	587.1	91.8	24.5	1.000008
85700.0	22.7	-45.9		34.8	587.2	91.9	24.9	1.000008
85800.0	22.6	-45.8		34.7	587.4	92.1	25.4	1.000008
85900.0	22.5	-45.7		34.5	587.5	92.2	25.8	1.000008
86000.0	22.4	-45.6		34.3	587.6	92.3	26.2	1.000008
86100.0	22.3	-45.5		34.1	587.8	92.4	26.6	1.000008
86200.0	22.2	-45.4		34.0	587.9	92.6	27.0	1.000008
86300.0	22.1	-45.3		33.8	588.0	92.7	27.4	1.000008
86400.0	22.0	-45.2		33.6	588.2	92.8	27.9	1.000007
86500.0	21.9	-45.1		33.5	588.3	92.9	28.3	1.000007
86600.0	21.8	-45.0		33.3	588.4	93.0	28.7	1.000007
86700.0	21.7	-44.9		33.1	588.6	92.8	28.8	1.000007
86800.0	21.6	-44.8		33.0	588.7	92.1	28.7	1.000007
86900.0	21.5	-44.7		32.8	588.8	91.5	28.5	1.000007
87000.0	21.4	-44.6		32.6	588.9	90.9	28.4	1.000007
87100.0	21.3	-44.5		32.5	589.1	90.2	28.3	1.000007
87200.0	21.2	-44.4		32.3	589.2	89.6	28.1	1.000007
87300.0	21.1	-44.3		32.1	589.3	88.9	28.0	1.000007
87400.0	21.0	-44.2		32.0	589.5	88.2	27.8	1.000007
87500.0	20.9	-44.1		31.8	589.6	87.6	27.7	1.000007
87600.0	20.8	-44.0		31.7	589.7	86.9	27.6	1.000007
87700.0	20.7	-43.9		31.5	589.9	86.2	27.5	1.000007
87800.0	20.6	-43.8		31.3	590.0	85.5	27.4	1.000007
87900.0	20.5	-43.7		31.2	590.1	84.8	27.2	1.000007

STATION ALTITUDE 4051.00 FEET MSL  
22 JUNE 83 1740 MDT  
ASCENSION NO. 90

UPPER AIR DATA  
1730030090  
JALLEN

GEODETIC COORDINATES  
33.12712 LAT DEG  
106.49511 LON DEG

TABLE 11 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (DEGREES(TN))	SPEED KNOTS	INDEX OF REFRACTION
88000.0	20.4	-43.6		31.0	590.3	84.1	27.1	1.000007
88100.0	20.4	-43.5		30.9	590.4	83.4	27.0	1.000007
88200.0	20.3	-43.4		30.7	590.5			1.000007
88300.0	20.2	-43.3		30.6	590.6			1.000007
88400.0	20.1	-43.2		30.4	590.8			1.000007
88500.0	20.0	-43.1		30.3	590.9			1.000007
88600.0	19.9	-43.1		30.1	590.9			1.000007
88700.0	19.8	-43.0		30.0	591.0			1.000007
88800.0	19.7	-43.0		29.9	591.0			1.000007
88900.0	19.6	-43.0		29.7	591.0			1.000007
89000.0	19.5	-42.9		29.6	591.1			1.000007
89100.0	19.5	-42.9		29.4	591.1			1.000007
89200.0	19.4	-42.9		29.3	591.2			1.000007
89300.0	19.3	-42.9		29.2	591.2			1.000006
89400.0	19.2	-42.8		29.0	591.2			1.000006
89500.0	19.1	-42.8		28.9	591.3			1.000006
89600.0	19.0	-42.8		28.8	591.3			1.000006
89700.0	18.9	-42.7		28.6	591.4			1.000006
89800.0	18.9	-42.7		28.5	591.4			1.000006
89900.0	18.8	-42.7		28.4	591.4			1.000006
90000.0	18.7	-42.6		28.2	591.5			1.000006
90100.0	18.6	-42.6		28.1	591.5			1.000006
90200.0	18.5	-42.6		28.0	591.5			1.000006
90300.0	18.4	-42.6		27.9	591.6			1.000006
90400.0	18.4	-42.5		27.7	591.6			1.000006
90500.0	18.3	-42.5		27.6	591.7			1.000006
90600.0	18.2	-42.5		27.5	591.7			1.000006
90700.0	18.1	-42.4		27.3	591.7			1.000006
90800.0	18.0	-42.4		27.2	591.8			1.000006

STATION ALTITUDE 4051.00 FEET  
22 JUNE 83  
ASCENSION NO. 90

MANDATORY LEVELS  
17300.00090  
JALLFN

GEODTIC COORDINATES  
33.16712 LAT DEG  
106.49511 LON DEG

TABLE 12

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	WIND DIR. TA DIRECTION (DEGREES(TN))	SPEED KNOTS
850.0	4915.	30.3	10.	135.6	11.1
800.0	6675.	25.6	19.	158.3	10.2
750.0	8517.	20.5	23.	163.1	9.1
700.0	10452.	15.1	28.	154.7	14.5
650.0	12490.	9.4	38.	144.0	16.5
600.0	14645.	3.4	51.	124.8	17.5
550.0	16936.	-3.1	66.	115.4	18.3
500.0	19398.	-8.3	60.	94.6	15.5
450.0	22043.	-14.4	39.	96.7	17.9
400.0	24946.	-19.4	73.	113.1	0.8
350.0	28158.	-27.0	74.	119.2	2.0
300.0	31740.	-36.0	66.	169.6	4.5
250.0	35802.	-46.5		147.6	12.1
200.0	40549.	-55.7		181.7	17.9
175.0	43337.	-55.7		189.0	22.9
150.0	46553.	-57.4		187.1	22.9
125.0	50255.	-66.3		157.3	21.5
100.0	54667.	-66.9		171.6	17.1
80.0	59092.	-65.4		138.3	10.7
70.0	61777.	-62.4		110.5	15.7
60.0	64888.	-62.8		105.7	18.2
50.0	68613.	-58.3		82.5	18.9
40.0	73236.	-56.6		85.0	21.5
30.0	79285.	-52.1		90.0	23.5
25.0	83193.	-48.1		86.1	21.3
20.0	88073.	-43.1			

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4040.00 FEET MSL  
22 JAN 63 1730 MDT  
ASCLUSION NO. 26

SIGNIF 1930040020  
STALLION DATA

GEODETIC COORDINATES  
33.41920 LAT DEG  
106.60501 LON DEG

TABLE 13

PRESSURE GEOMETRIC		TEMPERATURE		WET-BULB PERCENT
WALL TAP	ALTITUDE MFL FEET	AIR DEGREES	DEW-POINT CELSIUS	
050.2	4040.0	29.7	6.4	23.0
091.2	5250.2	27.9	0.0	17.0
025.6	5063.4	27.1	-0.0	17.0
770.4	7633.9	22.6	-2.2	19.0
711.8	9737.9	16.7	-4.5	23.0
701.0	10070.0	14.5	-5.3	25.0
600.2	11084.5	11.9	-4.7	31.0
631.8	12991.5	8.4	-4.7	39.0
571.6	15637.0	1.1	-5.8	60.0
541.4	17194.1	-3.3	-6.2	80.0
537.4	17582.4	-4.2	-7.0	81.0
521.2	17980.7	-5.5	-7.8	84.0
501.0	19439.0	-8.5	-9.2	95.0
481.0	20425.9	-10.0	-10.5	96.0
471.0	20797.8	-10.7	-11.7	92.0
461.2	21216.9	-12.2	-14.2	85.0
451.6	21629.8	-13.3	-16.0	80.0
441.8	22050.3	-14.5	-17.0	81.0
421.0	23294.5	-15.0	-18.4	80.0
421.0	23714.4	-16.2	-19.0	79.0
401.0	25921.5	-19.4	-22.2	78.0
350.4	27680.6	-24.8	-28.8	69.0
325.4	29967.8	-30.5	-34.7	60.0
301.0	31451.4	-35.2	-39.4	65.0
280.6	33173.2	-39.1	-45.2	52.0
250.0	35940.6	-46.2		
211.8	39309.1	-53.7		
201.0	40720.6	-54.2		
181.4	42547.1	-55.3		
161.8	44285.7	-56.8		
150.8	45434.9	-55.0		
150.0	46761.1	-57.3		
121.4	50420.2	-66.0		
111.0	53038.1	-66.7		
100.0	54940.0	-66.6		
80.4	58080.6	-66.9		
71.2	61483.2	-61.2		
70.0	62115.0	-62.5		
61.4	65130.2	-61.2		
57.6	66105.6	-60.3		

STATION ALTITUDE 4,400.00 FEET SL  
 22 JUNE 83 1730 MDT  
 ASCENSION NO. 26

SIGNIFICANT LEVEL DATA  
 17300.00ZG  
 STALLION

TABLE 13 CONT'D

PRECURE GEOAETIC ALTITUDE	TEMPERATURE AIR DEWPOINT	REL. HUM. PERCENT
MILLIBARS MSL FEET	DEGREES CENTIGRADE	
50.6 67208.9	-59.6	
50.0 69033.1	-58.3	
30.8 76076.9	-52.4	
30.0 79063.7	-51.5	
20.6 83304.4	-47.0	
20.2 85471.0	-45.1	
20.0 88767.3	-43.0	
10.6 92937.7	-41.7	

GEODETIC COORDINATES  
 33.41920 LAT DEG  
 106.66501 LONG DEG

STATION ALTITUDE 4040.00 FEET MSL  
22 JUNE 83 1730 MDT  
ASCENSION NO. 26

UPPER AIR DATA  
173000Z080300

STATION

TABLE 14

GEODETIC COORDINATES  
33-41920 LAT DEG  
106-66501 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> METER	SPEED OF SOUND M/SEC	DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
4940.0	850.2	29.7	23.0	973.8	679.4	150.0	9.9	1.000257
5000.0	840.5	29.4	21.8	973.2	678.9	151.6	10.0	1.000254
5500.0	834.5	27.0	17.0	963.4	676.5	193.6	11.0	1.000241
6000.0	819.7	26.8	17.2	949.5	675.6	173.3	12.5	1.000237
6500.0	805.6	25.5	17.7	937.2	674.1	160.8	14.2	1.000233
7000.0	791.7	24.2	18.3	925.0	672.7	167.0	15.4	1.000230
7500.0	775.0	22.9	18.8	913.0	671.2	193.3	15.7	1.000226
8000.0	764.4	21.6	19.7	901.3	669.6	198.7	15.5	1.000223
8500.0	751.9	20.2	20.6	889.6	668.0	204.0	15.0	1.000220
9000.0	737.8	18.8	21.6	878.4	666.4	205.6	14.0	1.000217
9500.0	724.9	17.4	22.5	867.2	664.8	206.0	12.7	1.000213
10000.0	712.1	15.9	23.7	856.2	663.1	199.6	11.2	1.000210
10500.0	699.4	14.5	25.1	845.3	661.4	188.2	9.8	1.000207
11000.0	686.8	13.5	27.2	832.7	660.4	174.2	9.0	1.000205
11500.0	674.5	12.6	29.4	820.3	659.4	160.2	9.2	1.000203
12000.0	662.4	11.5	31.8	808.0	658.1	147.5	9.9	1.000200
12500.0	650.4	10.0	35.4	798.3	656.3	139.0	10.7	1.000198
13000.0	638.6	8.4	39.1	788.2	654.5	133.5	11.4	1.000196
13500.0	626.8	7.0	43.0	777.4	652.9	128.8	12.2	1.000194
14000.0	615.2	5.6	47.0	766.8	651.3	124.5	13.3	1.000192
14500.0	603.9	4.2	51.0	756.4	649.7	121.0	14.6	1.000189
15000.0	592.7	2.9	54.9	746.1	648.1	118.6	16.0	1.000187
15500.0	581.8	1.5	58.9	736.0	646.4	118.1	17.8	1.000184
16000.0	570.9	.1	64.7	725.9	644.8	117.7	19.5	1.000182
16500.0	560.1	-1.3	71.1	715.9	643.1	116.2	20.2	1.000180
17000.0	549.5	-2.7	77.5	706.1	641.5	114.7	20.8	1.000177
17500.0	539.1	-4.0	80.8	696.0	639.9	112.4	21.4	1.000174
18000.0	528.6	-5.5	84.1	686.7	638.1	110.3	21.9	1.000171
18500.0	518.6	-6.6	87.9	676.1	636.8	108.7	21.3	1.000168
19000.0	508.6	-7.6	91.7	665.7	635.6	105.4	20.4	1.000165
19500.0	498.8	-8.6	95.1	655.3	634.4	100.7	19.4	1.000162
20000.0	489.1	-9.4	95.6	644.5	633.5	97.2	19.3	1.000159
20500.0	479.6	-10.1	95.2	633.9	632.5	94.0	19.3	1.000156
21000.0	470.2	-11.4	88.6	624.7	630.8	93.7	16.8	1.000152
21500.0	461.3	-13.0	81.6	616.3	628.9	93.5	14.4	1.000148
22000.0	451.9	-13.8	80.5	606.2	627.8	93.7	12.4	1.000145
22500.0	442.9	-14.6	80.9	595.9	626.9	93.4	10.6	1.000142
23000.0	434.1	-15.3	80.3	585.6	625.9	89.9	9.8	1.000139
23500.0	425.5	-16.0	79.5	575.7	625.1	87.3	8.6	1.000136
24000.0	416.9	-16.9	78.8	566.2	624.0	92.1	5.8	1.000133

STATION ALTITUDE 4,400.00 FEET SL  
22 JAN 63 1730 PDT  
ASCENDING NO. 26

UPPER AIR DATA  
1730000020  
STATION

GEODETIC COORDINATES  
33.41920 LAT DEG  
106.66501 LONG DEG

TABLE 14 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	RELATIVE HUMIDITY PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KILOIS	WIND DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24500.0	400.6	-18.1	78.4	557.5	622.5	107.0	3.3	1.000131
25000.0	400.3	-19.3	78.0	549.0	620.9	163.0	2.6	1.000128
25500.0	392.2	-20.4	76.4	540.0	619.7	201.2	4.1	1.000126
26000.0	384.2	-21.4	74.7	531.1	618.4	211.6	4.8	1.000123
26500.0	376.3	-22.4	73.0	522.4	617.1	219.2	5.6	1.000121
27000.0	368.6	-23.4	71.3	513.9	615.9	220.3	5.8	1.000118
27500.0	361.1	-24.4	69.6	505.4	614.6	221.2	6.0	1.000116
28000.0	353.6	-25.6	68.6	497.3	613.1	221.0	5.5	1.000114
28500.0	346.2	-26.8	67.9	489.4	611.6	220.4	4.9	1.000112
29000.0	339.0	-28.1	67.3	481.7	610.0	218.1	4.5	1.000110
29500.0	331.9	-29.3	66.6	474.0	608.4	213.7	4.2	1.000108
30000.0	324.9	-30.6	66.0	466.5	606.4	209.0	4.0	1.000106
30500.0	318.0	-31.8	65.7	459.9	605.3	209.2	4.2	1.000104
31000.0	311.2	-33.1	65.5	451.5	603.7	209.4	4.3	1.000102
31500.0	304.6	-34.3	65.2	444.2	602.1	224.2	3.7	1.000100
32000.0	298.0	-35.5	63.7	436.9	600.5	243.0	3.4	1.000099
32500.0	291.6	-36.9	59.5	429.0	598.9	240.0	3.4	1.000097
33000.0	285.2	-38.1	55.2	422.8	597.3	235.9	3.5	1.000095
33500.0	279.0	-39.5	49.4**	415.6	595.6	217.5	4.3	1.000093
34000.0	272.8	-40.8	39.3**	409.0	593.8	205.0	5.7	1.000092
34500.0	266.7	-42.2	29.2**	402.3	592.0	201.5	7.5	1.000090
35000.0	260.8	-43.6	19.1**	395.6	590.3	200.3	9.5	1.000088
35500.0	255.0	-45.0	8.9**	389.3	588.5	195.5	11.8	1.000087
36000.0	249.3	-46.3		382.9	586.7	191.0	14.3	1.000085
36500.0	243.6	-47.4		376.0	585.3	184.3	16.9	1.000084
37000.0	238.0	-48.6		369.2	583.8	178.1	19.8	1.000082
37500.0	232.5	-49.7		362.5	582.4	175.3	22.5	1.000081
38000.0	227.2	-50.8		355.9	580.9	173.8	25.1	1.000079
38500.0	222.0	-51.9		349.5	579.5	175.1	26.0	1.000078
39000.0	216.8	-53.0		343.2	578.0	177.1	26.5	1.000076
39500.0	211.9	-53.8		336.4	577.0	178.4	27.2	1.000075
40000.0	206.9	-53.9		329.7	576.8	179.5	28.0	1.000073
40500.0	202.1	-54.1		321.4	576.6	181.1	28.7	1.000072
41000.0	197.4	-54.4		314.3	576.2	182.0	29.5	1.000070
41500.0	192.7	-54.7		307.3	575.8	184.5	28.3	1.000068
42000.0	188.2	-55.0		300.5	575.4	186.5	26.4	1.000067
42500.0	183.8	-55.3		293.9	575.0	186.1	24.6	1.000065
43000.0	179.5	-55.7		287.5	574.5	183.1	22.9	1.000064
43500.0	175.2	-56.1		281.3	573.9	182.2	22.3	1.000063
44000.0	171.1	-56.6		275.2	573.4	184.0	22.8	1.000061

\*\* AT LAST ONE ASSURED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 9900.00 F. LT MSL  
22 JUNE 83 1730 HDT  
ASCENSION NO. 26

UPPER AIR DATA  
17300400Z  
STATION

GEODETIC COORDINATES  
33.61920 LAT DEG  
106.66501 LON DEG

TABLE 14 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
44500.0	167.1	-56.5		268.0	573.5	186.3	23.4	1.000060
45000.0	163.1	-55.7		261.3	574.5	189.4	24.4	1.000058
45500.0	159.5	-55.1		254.5	575.3	190.6	24.4	1.000057
46000.0	155.5	-56.0		249.5	574.1	188.3	22.4	1.000056
46500.0	151.0	-56.8		244.0	573.0	185.6	20.4	1.000054
47000.0	146.3	-57.9		239.9	571.6	183.0	17.2	1.000053
47500.0	144.7	-59.1		235.4	570.0	179.1	14.1	1.000052
48000.0	141.2	-60.2		231.0	568.4	173.7	13.4	1.000051
48500.0	137.8	-61.4		226.7	566.9	168.1	13.3	1.000050
49000.0	134.4	-62.6		222.4	565.3	165.3	13.9	1.000050
49500.0	131.2	-63.8		218.3	563.7	164.5	14.8	1.000049
50000.0	128.0	-65.0		214.2	562.1	165.9	15.1	1.000048
50500.0	124.9	-66.0		210.1	560.7	169.3	14.8	1.000047
51000.0	121.8	-66.2		205.0	560.5	170.4	14.8	1.000046
51500.0	118.8	-66.3		200.1	560.3	168.6	15.1	1.000045
52000.0	115.9	-66.4		195.2	560.1	167.5	15.5	1.000043
52500.0	113.0	-66.6		190.5	560.0	167.7	16.2	1.000042
53000.0	110.2	-66.7		186.0	559.8	169.0	16.8	1.000041
53500.0	107.5	-66.7		181.3	559.8	172.3	17.4	1.000040
54000.0	104.8	-66.6		176.8	559.8	174.5	18.1	1.000039
54500.0	102.2	-66.6		172.4	559.9	174.3	18.6	1.000038
55000.0	99.7	-66.6		168.2	559.9	174.8	18.6	1.000037
55500.0	97.2	-66.7		164.0	559.8	178.0	16.6	1.000037
56000.0	94.8	-66.7		160.0	559.8	181.9	14.7	1.000036
56500.0	92.5	-66.7		156.1	559.7	183.5	12.1	1.000035
57000.0	90.2	-66.8		152.3	559.6	185.9	9.5	1.000034
57500.0	88.0	-66.8		148.5	559.6	175.3	9.1	1.000033
58000.0	85.8	-66.9		144.9	559.5	161.9	9.8	1.000032
58500.0	83.7	-66.2		140.9	560.4	154.6	10.7	1.000031
59000.0	81.6	-65.4		136.9	561.6	151.5	11.5	1.000030
59500.0	79.6	-64.5		133.0	562.7	147.5	12.0	1.000030
60000.0	77.7	-63.7		129.2	563.8	140.1	11.8	1.000029
60500.0	75.8	-62.9		125.6	565.0	133.0	11.8	1.000028
61000.0	73.9	-62.0		122.0	566.1	130.5	11.7	1.000027
61500.0	72.1	-61.2		118.5	567.1	128.0	11.7	1.000026
62000.0	70.4	-62.3		116.3	565.7	126.3	11.7	1.000026
62500.0	68.7	-62.3		113.5	565.6	124.9	11.8	1.000025
63000.0	67.0	-62.1		110.7	565.9	118.9	12.7	1.000025
63500.0	65.4	-61.9		107.9	566.2	111.6	14.3	1.000024
64000.0	63.8	-61.7		105.2	566.5	107.1	15.5	1.000023

STATION ALTITUDE 4,000.00 FEET HSL  
22 JUNE 83 1730 MDT  
ASCENSION NO. 26

UPPER AIR DATA  
1730040020  
STATION

GEODETIC COORDINATES  
33.41920 LAT DEG  
106.44501 LONG DEG

TABLE 14 CONT'D

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUMIDITY PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KILOMETERS PER SECOND	WIND DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
64500.0	62.3	-61.5		102.5	566.8	105.7	15.5	1.000023
65000.0	60.8	-61.3		99.9	567.1	104.3	15.5	1.000022
65500.0	59.3	-60.9		97.3	567.6	103.7	15.1	1.000022
66000.0	57.9	-60.4		94.8	568.2	103.1	14.8	1.000021
66500.0	56.5	-60.0		92.4	568.7	100.7	15.1	1.000021
67000.0	55.2	-59.7		90.0	569.1	97.5	15.7	1.000020
67500.0	53.8	-59.4		87.7	569.6	95.2	16.4	1.000020
68000.0	52.6	-59.0		85.3	570.1	94.3	17.1	1.000019
68500.0	51.3	-58.7		83.3	570.5	93.5	17.8	1.000019
69000.0	50.1	-58.3		81.2	571.0	93.5	18.0	1.000018
69500.0	48.9	-57.9		79.2	571.6	93.6	18.1	1.000018
70000.0	47.8	-57.5		77.1	572.1	93.2	18.2	1.000017
70500.0	46.6	-57.1		75.2	572.7	91.8	18.2	1.000017
71000.0	45.5	-56.7		73.3	573.2	90.4	18.2	1.000016
71500.0	44.5	-56.2		71.4	573.8	88.7	18.5	1.000016
72000.0	43.4	-55.8		69.6	574.3	86.9	19.1	1.000015
72500.0	42.4	-55.4		67.9	574.9	85.3	19.6	1.000015
73000.0	41.4	-55.0		66.1	575.4	84.2	20.1	1.000015
73500.0	40.5	-54.6		64.5	576.0	83.2	20.4	1.000014
74000.0	39.5	-54.1		62.8	576.5	81.9	20.7	1.000014
74500.0	38.6	-53.7		61.2	577.1	80.3	21.0	1.000013
75000.0	37.7	-53.3		59.7	577.6	78.8	21.4	1.000013
75500.0	36.8	-52.9		58.2	578.2	79.2	21.9	1.000013
76000.0	35.9	-52.5		56.7	578.7	79.7	22.2	1.000012
76500.0	35.1	-52.3		55.4	579.0	81.2	22.2	1.000012
77000.0	34.3	-52.2		54.1	579.1	85.9	22.4	1.000012
77500.0	33.5	-52.1		52.8	579.3	90.6	21.9	1.000011
78000.0	32.7	-51.9		51.5	579.4	94.7	20.8	1.000011
78500.0	32.0	-51.8		50.3	579.6	98.6	19.8	1.000011
79000.0	31.2	-51.7		49.1	579.7	102.9	19.5	1.000011
79500.0	30.5	-51.6		46.0	579.9	105.2	19.3	1.000010
80000.0	29.8	-51.3		46.8	580.2	106.8	19.1	1.000010
80500.0	29.1	-50.7		45.6	581.1	108.5	19.7	1.000010
81000.0	28.5	-50.0		44.4	581.9	103.8	20.5	1.000010
81500.0	27.8	-49.4		43.3	582.8	99.4	21.2	1.000009
82000.0	27.2	-48.7		42.2	583.6	94.9	21.7	1.000009
82500.0	26.6	-48.1		41.1	584.5	89.1	22.5	1.000009
83000.0	26.0	-47.4		40.1	585.3	83.6	22.8	1.000009
83500.0	25.4	-46.8		39.1	586.1	79.8	22.4	1.000008
84000.0	24.8	-46.4		38.1	586.6	78.1		

STATION ALTITUDE 4490.00 FT. T HSL  
22 JUNE 83 1730 MDT  
ASCENSION IS. 26

UPPER AIR DATA  
1730000020  
STATION

GEODETIC COORDINATES  
33.81920 LAT DEG  
106.66501 LONG DEG

TABLE 14 CONT'D

GEOMETRIC ALTITUDE ASL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GRAMS PER CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION, SPEED KNOTS	INDEX OF REFRACTION
04500.0	24.2	-46.0		37.2	587.2	76.4	1.000008
05000.0	23.7	-45.5		36.3	587.8	74.6	1.000008
05500.0	23.2	-45.1		35.4	588.3	75.2	1.000008
06000.0	22.7	-44.8		34.6	588.7	75.9	1.000008
06500.0	22.1	-44.4		33.7	589.2	76.6	1.000008
07000.0	21.7	-44.1		32.9	589.6	81.3	1.000007
07500.0	21.2	-43.8		32.2	590.0	87.5	1.000007
08000.0	20.7	-43.5		31.4	590.4	93.1	1.000007
08500.0	20.2	-43.2		30.7	590.8	97.6	1.000007
09000.0	19.8	-42.9		30.0	591.1	100.4	1.000007
09500.0	19.4	-42.8		29.3	591.3	103.1	1.000007
10000.0	18.9	-42.6		28.6	591.5	105.7	1.000006
10500.0	18.5	-42.5		28.0	591.7		1.000006
11000.0	18.1	-42.3		27.3	591.9		1.000006
11500.0	17.7	-42.1		26.7	592.1		1.000006
12000.0	17.3	-42.0		26.1	592.3		1.000006
12500.0	16.9	-41.8		25.5	592.5		1.000006

STATION ALTITUDE 4440.00 FEET MSL  
22 JUNE 83 1730 PDT  
ASCENSION NO. 26

MANOLOGY LEVELS  
173004.020  
STALLION

GEOPTIC COORDINATES  
33.81920 LAT DEG  
106.66501 LON DEG

TABLE 15

PRESSURE GEOPOTENTIAL MILLIBARS	FLEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	4944.	29.7	6.3	23.	150.1	9.9
800.0	6698.	25.0	-1.0	18.	183.3	14.9
750.0	8536.	20.1	-3.1	21.	204.4	14.9
700.0	10467.	14.5	-5.3	25.	108.9	9.8
650.0	12506.	9.9	-4.6	36.	138.8	10.7
600.0	14664.	3.8	-5.1	52.	119.9	15.1
550.0	16459.	-2.7	-6.1	77.	114.8	20.8
500.0	19414.	-8.5	-9.2	95.	101.4	19.6
450.0	22072.	-14.0	-16.0	81.	93.8	12.0
400.0	24982.	-19.4	-22.2	76.	164.4	2.6
350.0	28198.	-26.2	-30.3	68.	220.7	5.3
300.0	31791.	-35.2	-39.4	65.	236.7	3.4
250.0	35865.	-46.2			191.6	13.9
200.0	40626.	-54.2			181.8	29.1
175.0	43424.	-56.1			182.2	22.3
150.0	46639.	-57.3			184.4	10.9
125.0	50343.	-66.0			169.1	14.9
100.0	54775.	-66.6			174.3	10.9
80.0	59207.	-64.7			149.3	12.1
70.0	61908.	-62.5			126.1	11.8
60.0	65038.	-61.1			104.0	15.3
50.0	68779.	-58.3			93.5	16.0
40.0	73429.	-54.4			82.9	20.2
30.0	79529.	-51.5			100.3	19.3
25.0	83457.	-46.5			78.9	22.6
20.0	88357.	-43.0			98.9	21.8

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

END

FILMED

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